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THE LEPIDOPTERA OF CEYLON.

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THE

LEPIDOPTERA OF CEYLON.

BY

F. MOORE, F.Z.S.

ASSOCIATE OF THE LINNEAN SOCIETY OF LONDON; MEMBER OF THE ENTOMOLOGICAL SOCIETY OF LONDON; CORRESPONDING MEMBER OF THE ENTOM. SOC. OF STETTIN, AND OF THE ENTOM. SOC. OF THE NETHERLANDS.

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THE LEPIDOPTERA OF CEYLON.

Section HETEROCERA.

Family SPHINGIDÆ.

Forewing long, narrow; submedian vein with a lower basal branch. Hindwing small; with the subcostal and costal veins joined together by a short transverse subbasal spur. Palpi broad, compressed, terminal joint minute; antennæ more or less prismatic, gradually thickened towards the middle, and with a slender ciliated tip; proboscis in some species extremely long. Flight very powerful; crepuscular and diurnal.

Larva cylindrical, either naked or covered with minute granular tubercles; furnished with a dorsal horn on 11th segment. Pupa beneath the earth, or in a light cocoon on the surface.

Subfamily SPHINGINÆ.

Imago Chœrocampine in form, but with the head generally smaller, the thorax variable in length; proboscis very long.

Larva with the anterior segments very slightly smaller than the posterior; generally marked with oblique lateral stripes; horn (when present) rather long; head tolerably large; position, when in repose, almost sigmoidal. Pupa frequently with an external sheath for the proboscis. (*Butler.*)

Genus NEPHELE.

Nephele, Hübner, Verz. bek. Schmett. p. 133 (1818-25).

Zonilia, Walker, Catal. Lep. Het. Brit. Mus. viii. p. 192 (1856); Boisd. Spec. Gén. Lep. Het. p. 139 (1874).

Forewing moderately short and broad; costa slightly arched towards the end, apex pointed, exterior margin oblique, even, slightly convex in middle; costal vein long; first subcostal branch emitted at one-third, second at one-fifth before end of the cell, and extending to near apex, fourth from below third at one-sixth beyond the cell, fifth from end of the cell; discocellular inwardly oblique, bent slightly outward

below the middle, the radial from the angle; cell short; middle median at one-fifth and lower median at three-fifths before end of the cell; submedian much recurved upwards, basal branch short: hindwing short, somewhat pointed at the apex; exterior margin very oblique, recurved; abdominal margin very short; costal vein extending to apex; subcostal joined to costal by a short oblique ascending spur at nearly one-half from its base; two subcostal branches from end of the cell; upper much arched from its base; discocellular outwardly oblique, slightly bent inward at the middle; radial from the angle; middle median at one-fifth and lower median at nearly one-half before end of the cell; submedian straight, internal recurved. Body fusiform; head large, prominent, conical; palpi large, thick, projecting beyond front of head; legs long, slender; antennæ of male serrated-ciliate; proboscis rather long.

NEPHELE HESPERA (Plate 72, Fig. 1, 1 *a*, *b*, larva).

Sphinx hespera, Fabricius, Syst. Ent. p. 546 (1775).
Nephele hespera, Butler, Trans. Zool. Soc. ix. p. 624 (1876).
Sphinx chiron, Cramer, Pap. Exot. ii. p. 62, pl. 137, f. E (1779).
Sphinx Morpheus, Cramer, Pap. Exot. ii. p. 84, pl. 149, f. D (1779).
Zonilia Morpheus, Walker, Catal. Lep. Het. B. M. viii. p. 194; Boisd. Spec. Gén. Lep. Het. p. 139.
Sphinx didyma, Fabr. Spec. Ins. ii. p. 148 (1781).
Sphinx quaterna, Charpentier, Edit. Esper's Ausl. Schmett. *Sph.* pl. 1, f. 2 (1830).
Perigonia obliterans, Walker, Catal. Lep. Het. Brit. Mus. Suppl. p. 28 (1864).

Greenish olive-brown: forewing crossed by two waved more or less distinct darker subbasal lines, two antemedial and two sinuous postmedial lines, a similar coloured discal sinuous line, and an angulated submarginal line; some specimens of both sexes with a very indistinct blackish discocellular spot or a small pure white lunule and contiguous upper spot, the two latter being also sometimes connected: hindwing darker brown, the outer border somewhat dusky. Abdomen with broad black segmental lateral bands; sides of thorax and palpi beneath grey; legs greyish-brown.

Expanse $2\frac{1}{2}$ to 3 inches.

Larva (*Young*). Olive-green, minutely dotted with olive-brown; from 4th segment a dorsal row of slender oblique violet-brown streaks, below which is a longitudinal line extending to tip of horn; a reversely oblique violet-brown streak also on 7th to 11th segment; spiracles black. *Adult*: green, with an oblique pale-bordered stripe on 3rd to 5th segment, and a longitudinal line from 8th segment to base of horn; spiracles black. Pupa pale dull red; wing cases with a few dusky spots; abdominal segments minutely spotted, and a lateral darker streak; spiracles and caudal spine black.

"Feeds on *Carissa Carandas*."

Genus DILUDIA.

Diludia, Grote and Robinson, Proc. Ent. Soc. Phil. v. p. 188 (1865).
Macrosila (part), Walker, Catal. Lep. Het. B. M. viii. p. 198 (1856).
Meganoton (part), Boisd. Spec. Gén. Lep. Het. p. 58 (1874).

Similar to Protoparce (*P. Convolvuli*): forewing slightly broader and the exterior margin even; middle median emitted at one-fourth and lower at one-half before end of the cell: hindwing with a more oblique, and even exterior margin; discocellular veinlet nearly straight; radial from its middle. Body shorter, stouter; head smaller; palpi broader and more pointed in front; antennæ thinner; tarsi longer and more slender.

DILUDIA DISCISTRIGA (Plate 73, Fig. 1, 1 *a*, *b*, larva).

Macrosila discistriga, Walker, Catal. Lep. Het. Brit. Mus. viii. p. 209 (1856); Moore, Catal. Lep. Mus. E. I. C. i. p. 268 (1857).
Diludia discistriga, Butler, Trans. Zool. Soc. 1876, p. 615.
Meganoton discistriga, Boisduval, Spec. Gén. Lep. Het. p. 59 (1874).

Wings comparatively longer and narrower than in *D. Vates*: forewing darker grey; the transverse markings similar, prominent, more sinuous, the streak below the apex shorter: hindwing much darker.

Expanse, ♂ $3\frac{1}{2}$, ♀ $4\frac{1}{2}$ inches.

Larva (Adult). Green, darkest on anterior segments; with a dorsal yellowish band, from which proceed white-bordered dark green oblique lateral stripes, the dorsal band with two minute violet-brown spots, the stripes with two similar short linear spots, the anterior and posterior stripe brown streaked; anterior segments with transverse rows of white dots; horn with yellow tubercles. Pupa dusky red, with exserted proboscis.

"Feeds on Ligustrum, Vitex, &c." (*Thwaites.*)

DILUDIA VATES (Plate 74, Fig. 1, 1 *a*, ♂ ♀).

Diludia Vates, Butler, P. Z. S. 1875, p. 13; Trans. Zool. Soc. 1876, p. 616, pl. 91, fig. 18, 19.

Forewing light grey, with two or three whitish spots on basal half of the costa and at centre of discoidal cell; a double angulated discal series of brownish-edged lunate spots; a small oblique spot towards middle of costa, a less oblique streak crossing the cell near its end, two parallel streaks within the interspaces, a small lunule beneath them, an irregular streak margining the apical patch, and a series of spots at end of the veins upon the fringe, black-brown; an indistinct discal series of brown dots: hindwing fuliginous-brown, abdominal area paler; costal border testaceous; anal angle grey and crossed by two brown sinuous streaks. Cilia alternated with white. Body grey; tegulæ and hind part of thorax margined externally by a black streak slightly bordered within by ochreous; abdomen with

blackish dorsal line and paler lateral line, segments with slight narrow brownish bands; palpi with a broad brown lateral band; tarsi with brown bands.

Expanse, ♂ 3, ♀ 4¼ inches.

DILUDIA OBLIQUA (Plate 74, Fig. 2).

Macrosila obliqua, Walker, Catal. Lep. Het. Brit. Mus. viii. p. 208 (1856).
Diludia obliqua, Butler, Trans. Zool. Soc. 1876, p. 614.

Forewing brownish-grey; crossed by a subbasal, three irregular antemedial, three postmedial, and a discal sinuous brown whitish-bordered slender band, the medial upper area also brown and traversed by an oblique darker brown fascia which extends from middle of the costa to exterior margin and spreads hindward towards posterior angle, and has a contiguous patch on the margin in front; a dark brown zigzag streak extending below the apex: hindwing brown, with two indistinctly darker brown transverse sinuous fasciæ extending from anal angle; abdominal border and angle greyish. Body brownish-grey; collar and tegulæ brown streaked and hind part of thorax blackish streaked; abdomen brown speckled, with indistinct darker dorsal and lateral lines; palpi with brown lateral streak; tarsi with brown bands.

Expanse 5½ inches.

Genus PROTOPARCE.

Protoparce, Burmeister, Abhandl. Nat. Gesellsch. Halle, p. 63 (1855).
Phlegethontius et *Agrius* (part), Hübner.

Forewing long, narrow; costa arched near the end, apex pointed; exterior margin slightly uneven, very oblique and slightly convex; posterior margin much recurved; first subcostal vein emitted at one-third and second at one-ninth before end of the cell, fourth at one-third beyond the cell from below the third, fifth immediately beyond end of the cell; discocellular inwardly oblique, slightly bent near lower end, radial from the angle; cell long, narrow; middle median at one-fifth, and lower at three-fifths before end of the cell; submedian recurved, emitting a lower branch inward about one-third from its base: hindwing narrow; apex somewhat pointed; exterior margin very oblique, slightly waved and angulated near the anal angle; cell narrow, extending about one-third the wing; costal vein slightly arched in the middle; a short oblique subcostal spur at one-third from its base joined to the costal; two subcostal branches from immediately beyond end of the cell; discocellular outwardly oblique, twice bent, upper angled inward in the middle, radial from lower angle; middle median at one-fifth and lower at one-third before end of the cell; submedian straight, internal recurved. Body long, fusiform; head moderate; palpi bluntly pointed in front; antennæ long, thick; tarsi long, slightly spined (*P. Convolvuli*).

PROTOPARCE ORIENTALIS (Plate 75, Fig. 1, 1 *a—e*, larva).

Protoparce orientalis, Butler, Trans. Zool. Soc. 1876, p. 609, pl. 91, fig. 16, 17.
Sphinx Convolvuli, Moore, Catal. Lep. Mus. E. I. C. i. p. 267, pl. 9, fig. 3, 3*a*.

Forewing grey, blackish-speckled; crossed by two subbasal, two antemedial zigzag grey-bordered black streaks, and two postmedial, acutely and lengthened pointed, zigzag lines; some black oblique streaks on the costa, and a zigzag line below the apex; some white-bordered circular black marks along exterior margin, and an indistinct dusky fascia obliquely across middle of the wing traversed by two distinct black lines between the median veins; a grey and black-speckled spot at end of the cell: hindwing brownish-grey, suffused with pale blue basally; crossed by a subbasal, two medial, and a submarginal blackish sinuous band. Female with all the markings paler. Thorax grey, with black streaks and circular spots on hind part; abdomen purplish-red, with a broad grey dorsal band, black transverse bands with white segmental borders; tarsi with brown bands.

Expanse $3\frac{1}{4}$ to $3\frac{3}{4}$ inches.

Larva (*Young*). Pale green, with indistinct darker oblique stripes. (*Another Stage.*) Immediately after change of skin—darker spotted green, oblique stripes paler, but more distinct; horn yellowish; head with green bands; spiracles black ringed. Becomes darker coloured in seven or eight hours after. (*Further Stage.*) Brighter green; oblique stripes very distinct and blackish-bordered anteriorly; spiracles red centred. (*Adult.*) Before changing to pupa—pale olivaceous-ochreous, whitish beneath; transversely dotted with brown; spiracles black; head with blackish bands. Pupa dusky red, with black spiracles; proboscis case exserted. Feeds on *Calonyction speciosum*, *Pharbitis nil*, *Argyreia cymosa*, *Ipomœa polyanthes*, *Phasëolus*, &c.

Subfamily ACHERONTIINÆ.

Imago clumsy; legs, antennæ, and proboscis thick, the latter very short; head, thorax, and abdomen short and broad.

Larva thick, clumsy, *Sphinx*-like, but with the horn always more or less recurved at the tip and tuberculated or granulose. (*Butler.*)

Genus ACHERONTIA.

Acherontia, Ochsenheimer, Schmett. Eur. iv. p. 44 (1816); Hübner, Verz. bek. Schmett. p. 139 (1818-25); Boisd. Spec. Gén. Lep. Het. p. 4 (1874).
Manduca, Hübner, Tentamen, p. 1 (1806).
Brachyglossa, Latreille; Boisduval (1829).

Forewing long, slightly arched towards the apex; exterior margin oblique, even, slightly convex; first subcostal vein at nearly one-half and second at one-twelfth

before end of the cell, fourth at one-third beyond the cell from below the third, fifth from end of the cell; discocellular inwardly oblique, bent outward at one-third from lower end, radial from above the angle; cell long, upper end extending beyond half the wing; middle median at one-fifth and lower at three-fifths before end of the cell; submedian curved towards the end and emitting a lower branch inward at one-third from its base: hindwing angularly convex at apex; exterior margin even, slightly concave beyond the middle; costal vein slightly recurved, extending to apex; a short oblique subcostal spur emitted at nearly one-half from its base, and joined to costal; two subcostal branches at a short distance beyond end of the cell; discocellular outwardly oblique, upper end concave, radial from the angle; cell short, broad; middle median at one-fifth and lower at two-fifths before end of the cell; submedian and internal vein recurved. Body large, bluntly fusiform; head large and broad; palpi laterally adpressed, apex convex in front; antennæ short, very thick, serrated, terminating in a slender bristle; legs very thick; tarsi short, stout, numerously spined.

ACHERONTIA LACHESIS (Plate 77, Fig. 1, 1 *a, b,* larva).

Sphinx Lachesis, Fabricius, Ent. Syst. Suppl. p. 434 (1798).

Acherontia Morta, Hübner, Verz. bek. Schmett. p. 140; Butler, Trans. Zool. Soc. 1876, p. 598, pl. 92, fig. 9.

Sphinx Atropos, Cramer, Pap. Exot. iii. pl. 137, fig. E; Gray in Cuvier's Anim. Kingdom, pl. 137, f. 4 (*nec* Linn.).

Acherontia Satanas, Boisd. Spec. Gén. Lep. *Pap.* pl. 16, f. 1 (1836); Moore, Catal. Lep. Mus. E. I. C. i. p. 267, pl. 9, f. 2, 2*a*; Boisd. Spec. Gén. Lep. Het. p. 7.

Acherontia Lethe, Westwood, Cabinet of Orient. Entom. p. 187, pl. 42, f. 2 (1847); Walker, Catal. Lep. Het. B. M. viii. p. 235.

Forewing blackish chestnut-brown, ochreous and grey speckled, with transverse prominent blackish irregularly undulated basal band, ochreous-bordered antemedial zigzag lines, and grey-bordered postmedial sinuous lines; also less defined confluent greyish and ochreous subapical and submarginal lines; middle of the wing with irregular black sinuous streaks and oblique fasciæ extending to outer margin; a greyish-white dot at end of the cell; an ochreous-yellow hairy patch at base of posterior margin: hindwing ochreous-yellow, with three broad black sinuous-bordered bands. Thorax, head, palpi, and legs blackish chestnut-brown; thorax grey speckled, tegulæ and metathorax black streaked, middle of thorax more or less grey, red bordered, black spotted and cross streaked, these markings pale bordered; abdomen with broad black segmental bands and lateral yellow bands, the latter decreasing towards apex, a broad dark slaty-blue dorsal band; legs with yellow bands.

Expanse, ♂ 4, ♀ 5 inches.

Larva (Adult). Green, with blue-bordered yellow oblique lateral stripes; spiracles black; head black striped; horn with yellow tubercles. Pupa dark dusky red.

"Feeds on *Datura*."

ACHERONTIA STYX (Plate 76, Fig. 1, 1 *a*, *b*, larva).

Acherontia Styx, Westwood, Cabinet of Oriental Ent. p. 88, pl. 42, fig. 3 (1847); Moore, Catal. Lep. Mus. E. I. C. i. p. 266, pl. 9, fig. 1, 1*a*; Boisd. Spec. Gén. Lep. Het. p. 6 (1874); Butler, Trans. Zool. Soc. 1876, p. 597.

Forewing black, grey speckled; crossed by three antemedial, three postmedial, and a submarginal black irregular sinuous line, the interspaces of the antemedial lines dull red; a red narrow parallel streak between the veins from the cell to exterior margin, and a red streak within the cell; upper interspace of postmedial and submarginal lines also red; a yellow spot at end of the cell: hindwing ochreous-yellow, with a narrow black medial and a submarginal band, the latter crossed by black veins; cilia with black linear streaks. Thorax, head, and palpi black, grey speckled; tegulæ and thorax black streaked; middle of thorax reddish-grey with two black spots and indistinct lower streaks; abdomen ochreous-yellow, with narrow black segmental bands and greyish-blue dorsal band; legs with black bands.

Expanse, ♂ $3\frac{1}{2}$, ♀ $4\frac{1}{4}$ inches.

Larva (Adult). Green; fifth to last segment darker spotted, and with a lateral oblique yellow stripe; horn yellow, tuberculated. Pupa dusky red.

"Feeds on *Solanum melongena*, *S. trilobatum*, *Stachylarpheta indica*, *Coccinia indica*, &c."

Subfamily SMERINTHINÆ.

Imago with the head and thorax short and broad; palpi small; antennæ of male more or less pectinated.

Larva rugose; with the anterior segments tapering towards the head, which is abruptly and decidedly larger, flattened in front, and angular above; horn straight. (*Butler*.)

Genus CYPA.

Cypa, Walker, Catal. Lep. Het. Brit. Mus. xxxi. p. 41 (1864); Boisd. Spec. Gén. Lep. Het. p. 52 (1874).

Forewing elongate, triangular; apex slightly falcate; exterior margin very oblique and irregularly angulated; posterior margin concave at the end; cell long, upper end extending beyond half the wing; first subcostal emitted at nearly one-half and second at one-twelfth before end of the cell, third terminating at apex, fourth from below third at one-half beyond the cell, fifth from immediately beyond the cell;

discocellular very inwardly oblique, radial from below the middle; the middle median at one-third and lower at one-half before end of the cell; submedian much recurved, arched upward and extending close to lower median towards the end, emitting a straight short basal branch near the base: hindwing with nearly straight costa, apex very convex, exterior margin even, slightly concave in the middle and angular at end of submedian vein, abdominal margin short; cell broad, extending half the wing; costal vein extending to apex; subcostal with a short spur joined to costal at one-third from the base; two subcostal branches at one-third beyond end of the cell; discocellular outwardly oblique, slightly convex, radial from one-third above its lower end; middle median at one-sixth and lower at two-fifths before end of the cell; submedian and internal veins widely apart, internal recurved and terminating at anal angle. Body moderately stout, smooth, fusiform, male with short lateral anal tuft; thorax extending half beyond base of wings; head short; palpi compactly adpressed; antennæ short, serrate-ciliate; proboscis not visible.

CYPA FERRUGINEA (Plate 79, Fig. 3).

Cypa ferruginea, Walker, Catal. Lep. Het. Brit. Mus. xxxi. p. 42 (1864); Boisd. Spec. Gén. Lep. Het. p. 53; Butler, Trans. Zool. Soc. 1867, p. 554.

Ferruginous: forewing with two or three very indistinct transverse darker waved fasciæ, and three similar discal fasciæ, the inner discal being broadest and the two outer sinuous, the points of the latter paler; the fasciæ in the male more distinct and with paler interspaces; the outer margin of the wing dusky ferruginous; a small dusky black spot at lower end of the cell: hindwing palest along costal border; cilia ferruginous-yellow. Abdomen with slightly darker ferruginous dorsal segmental bands.

Expanse, ♂ 2, ♀ 2½ inches.

Genus MARUMBA.

Triptogon (part), Butler, Trans. Zool. Soc. 1876, p. 586.*

Forewing long; costa much arched towards the apex; exterior margin oblique, scalloped; posterior margin concave towards the end; first subcostal emitted at one-third and second at one-ninth before end of the cell, fourth from below third at nearly one-half beyond the cell, fifth from immediately beyond the cell; discocellular slight, very oblique and concave, radial from below the middle; cell extending to half the wing; middle median at one-fifth and lower at one-half before end of the cell; submedian much recurved, emitting a lower inward branch at one-fifth from the base: hindwing narrow; apex convex; exterior margin slightly scalloped, and angulated near apex; cell broad, short, not extending to half the wing; costal vein

* The type of *Triptogom*, Bremer (*T. dissimilis*), belongs to a different group.

arched at the base, extending to apex; subcostal with a short oblique spur ascending and joined to costal; two subcostal branches from immediately beyond end of the cell; discocellular outwardly oblique, upper end angled in the middle, above the radial; middle median at one-fifth and lower at one-third before end of the cell; submedian and internal vein slightly recurved. Body large, laxly squamose; thorax short; head small; palpi obtuse, compact; antennæ large, long, strongly pectinate in male, tip slender (*M. Dyras*).

MARUMBA CEYLONICA (Plate 79, Fig. 2, ♀).

Triptogon Ceylonica, Butler, P. Z. S. 1875, p. 255; Trans. Zool. Soc. 1876, p. 587.
Smerinthus Dyras (part), Walker, Catal. Lep. Het. Brit. Mus. viii. p. 250.

Pale olivaceous brownish-ochreous: forewing with a short brown basal streak, three transverse antemedial slightly waved lines, of which the first is outwardly oblique and the third inwardly oblique—thus nearly touching one another on the posterior margin; a parallel postmedial line, followed by two less distinct waved lines, an irregularly undulated line which is slightly sinuous at the costal end and curved over a black spot before the posterior angle; from the costa before the apex extends a duplex line to posterior angle: hindwing pale reddish-ochreous, anal angle pale brownish-ochreous, marked with two dark purple-black spots. Thorax and abdomen traversed by a brown dorsal line; palpi, and legs above brown.

Expanse, ♂ $2\frac{3}{4}$, ♀ $3\frac{3}{4}$ inches.

MARUMBA DYRAS (Plate 78, Fig. 1, 1 *a*, *b*, *c*, ♂ ♀, larva).

Smerinthus Dyras (part), Walker, Catal. Lep. Het. Brit. Mus. viii. p. 250 (1856).
Triptogon Dyras, Butler, Trans. Zool. Soc. 1876, p. 586.

Very similar to *M. Ceylonica.* Differs in being larger and darker coloured; the forewing having four brown transverse antemedial lines, two postmedial lines, and the irregularly undulated line not sinuous at the costal end; below the dark purple-black spot is also a dash of the same colour before the angle: hindwing similar, but darker.

Expanse, ♂ $3\frac{1}{2}$, ♀ $4\frac{1}{4}$ inches.

Larva pale green, bluish-green when adult, covered with paler short granular spines; a lateral band on fifth to last segment; horn spinous; head triangular, flattened in front, with a pale whitish streak down the cheek; a short serrated longitudinal lateral streak on the third and fourth segments. Pupa dusky red, with black segmental bands, and short exserted proboscis.

"Feeds on Sterculiaceæ, &c." (*Thwaites.*)

Genus LEUCOPHLEBIA.

Leucophlebia, Westwood, Cabinet of Oriental Entom. p. 46 (1847); Walker, Catal. Lep. Het. B. M. ix. p. 136 (1856); Boisd. Spec. Gén. Lep. Het. p. 55 (1874).

Forewing narrow, long, lanceolate; first subcostal branch emitted at one-third and second at one-twelfth before end of the cell, fourth at one-third beyond the cell, fifth from end of the cell; discocellular very obliquely inward, concave at lower end, radial from below the middle; cell more than half the wing; middle median at one-sixth and lower at one-twelfth before end of the cell; submedian straight, emitting a basal lower branch at one-fourth: hindwing rather long and narrow, apex pointed, exterior margin very oblique, convex; cell large, broad, extending more than one-third the wing; costal vein extending to apex; subcostal with a short oblique spur one-third from the base ascending to and joined to the costal; two subcostal branches at a short distance beyond end of the cell; discocellular outwardly oblique, upper end angulated inward, radial from the middle; the middle median at one-sixth and lower at one-twelfth before end of the cell; submedian and internal veins straight. Body long, thorax and head short, head small; palpi thick, broad and flat in front, composed of lax hairy scales, third joint minute; antennæ long, thick, in male serrate-ciliate; legs thick, femora and tibiæ laxly hairy beneath.

LEUCOPHLEBIA ROSACEA (Plate 80, Fig. 3).

Leucophlebia rosacea, Butler, P. Z. S. 1875, p. 15, pl. 2, fig. 4, ♂.

Forewing pale pinkish-red, with a broad deep yellow band extending from base of the cell to below apex, and a narrower yellow fascia from below the base of the cell to posterior angle; median veins also lined with yellow: hindwing ochreous-yellow. Cilia whitish. Thorax creamy-white, slightly suffused with pale pink; front of head, and palpi, dark purple-red; abdomen and legs purplish-red; shaft of antennæ creamy-yellow, serrations ochreous-yellow; middle and hind legs above yellow.

Expanse ♂ $2\frac{5}{8}$ inches.

Subfamily AMBULICINÆ.

Imago with externally rounded palpi; antennæ slender in both sexes; eyes salient; thorax rather short; abdomen of male produced behind, with lateral angular expansions.

Larva with the anterior segments non-retractile, tapering slightly towards the head, which is abruptly rather larger and rounded; horn oblique, not curved, but slightly pointed upward at the tip; a series of lateral oblique stripes. (*Butler.*)

Genus AMBULYX.

Ambulyx, Westwood, Cabinet of Orient. Entom. p. 61, pl. 30, f. 2 (1847); Walker, Catal. Lep. Het. B. M. viii. p. 120 (1856).

Forewing considerably arched towards the end, apex very acute and falcate, exterior margin very oblique and slightly uneven, posterior margin much recurved; first subcostal emitted at one-third and second at one-seventh before end of the cell, fifth immediately beyond end of the cell; discocellular obliquely concave; radial from below the middle; cell narrow, extending to half the wing; middle median at one-fifth and lower at two-thirds before end of the cell; submedian recurved, lower basal branch at one-fourth from the base: hindwing short, exterior margin slightly scalloped; cell extending to one-third the wing; a short oblique subcostal spur joined to costal; two subcostal branches on a short footstalk beyond the cell; discocellular recurved; middle median at one-sixth and lower at one-half before end of the cell. Body moderate, anal segment in male with slight lateral tuft; head tufted at base of antennæ; palpi broad, second joint ascending to vertex, third joint minute, conical; antennæ pectinate-ciliate, slender at tip.

AMBULYX AURIPENNIS (Plate 79, Fig. 1, 1 *a*, *b*, larva).

Ambulyx auripennis, Moore, P. Z. S. 1879, p. 388.

Male: forewing pale brownish yellowish-ochreous, palest basally, and tinted with olivaceous externally; crossed by two very indistinct antemedial sinuous slender brown lines, two distinct curved discal sinuous lines, and a more prominent brown curved submarginal line, each line most distinct at the costal end; a curved costal streak before the apex; a dark sap-brown spot at base of the cell and a larger spot below the cell: hindwing brownish-ochreous, costal border yellowish; crossed by three short blackish sinuous fasciæ. Body pinkish ochreous-brown; frontal band broad, lateral band on thorax, and a narrow dorsal line sap-brown; palpi, pectus, and anal segments beneath ferruginous.

Expanse 3 inches.

Larva pale green, ringed with darker green granular spots; a very pale yellow lateral oblique stripe on fifth to last segment; claspers dark spotted; horn purple with whitish tubercles. Pupa reddish, with yellowish tinged head, thorax beneath and abdominal rings.

"Feeds on Dipterocarpus." (*Thwaites.*)

AMBULYX THWAITESII (Plate 80, Fig. 2, 2 *a*, *b*, larva).

Yellowish-ochreous, the basal, discal, and apical area deeper coloured; crossed by an antemedial angulated line and postmedial sinuous blackish lines, a submarginal duplex line terminating in a greyish streak below the apex; a grey spot at end of the

cell, and some subbasal grey-bordered black spots: hindwing yellowish-ochreous, deeper coloured at the base; crossed by two discal sinuous black fasciæ, and a paler marginal band. Thorax and frontal band reddish-ochreous, tegulæ and a lower transverse black band bordered with grey, two subdorsal grey-bordered black spots on third anal segment.

Expanse 3½ inches.

Larva olive-green above, bluish laterally, ringed with paler granular spots; a white spotted subdorsal line and oblique lateral stripes; a subdorsal purplish triangular mark and lateral similar coloured patches on sixth to last segments, and a longitudinal streak on second and third segment; horn green, granulated with white. Pupa dark purplish reddish-brown with pale abdominal bands.

AMBULYX TURBATA (Plate 80, Fig. 1).

Ambulyx turbata, Butler, P. Z. S. 1875, p. 252.

Forewing dark purplish reddish-brown, suffused with olivaceous; crossed by two antemedial and three postmedial sinuons black grey-bordered lines, and a submarginal straight pale reddish line ending below the apex in a greyish streak; a grey-centred spot at end of the cell, and a subbasal series of more prominent grey-bordered black spots: hindwing paler, yellowish on costal border; crossed by a medial black straight fascia, two confluent sinuous lines, and a marginal band, the latter and the cilia grey streaked at anal end. Body dark purplish reddish-brown; frontal band and tegulæ laterally olive-black and grey-bordered; two subdorsal similar coloured spots on third anal segment.

Expanse 4¼ inches.

Genus AMBLYPTERUS.

Amblypterus, Hübner, Verz. bek. Schmett. p. 133 (1818-25).

*Calymnia,** Walker, Catal. Lep. Het. B. M. viii. p. 123 (1856); Boisd. Spec. Gén. Lep. Het. p. 13 (1874).

Forewing very long, narrow; apex produced, convex; exterior margin very oblique; posterior margin much recurved; cell long, narrow, extending more than half the wing; first subcostal vein emitted at one-third and second at one-ninth before end of the cell, fifth from end of the cell; discocellular very inwardly oblique, bent inward below the middle, radial from the angle; middle median at one-fifth and lower at two-thirds before end of the cell; submedian much recurved in the middle, basal lower branch long: hindwing rather long, apex convex, anal angle pointed; cell short, narrow, extending to one-third the wing; a short subcostal spur joined to the costal, two subcostal branches on a footstalk some distance beyond end of the cell; discocellular outwardly oblique, upper end concave, radial from the middle;

* Previously used by Hübner for a genus of Noctuidæ.

the middle median at one-sixth and lower at one-half before end of the cell; submedian and internal vein nearly straight. Body large, very stout, abdomen very thick, apex attenuated; antennæ moderate; head small, projected in front; palpi pointed; legs short, very thick.

AMBLYPTERUS PANOPUS (PLATE 81, FIG. 1, 1 *a*, *b*, larva).

Sphinx Panopus, Cramer, Pap. Exot. iii. pl. 224, fig. A, B (1782).
Amblypterus Panopus, Hübner, Verz. bek. Schmett. p. 133 (1818-23).
Smerinthus Panopus, Westwood, Cabinet of Oriental Entom. p. 13, pl. 6, fig. 2 (1847).
Calymnia Panopus, Walker, Catal. Lep. Het. B. M. viii. p. 124 (1856); Boisd. Spec. Gén. Lep. Het. p. 13 (1874).

Pinkish brownish-ochreous: forewing crossed by a subbasal oblique straight dark purplish-brown band which is basally traversed by grey waved sinuous lines, a discal parallel similar but narrower band with irregular suffused olive-brown outer border, and a marginal olive-brown angulated band traversed by a blackish sinuous line; a brown spot at end of the cell; the medial area of the wing crossed by grey-bordered brown more or less indistinct sinuous lines, and the discal area more or less speckled with brown spots and adorned with a large black, grey-centred, olive-brown bordered ocellate spot before the posterior angle, the inner border of this spot traversed by slender sinuous grey lines, which are continued indistinctly across the disc and ascend parallel to the marginal angular band up to the apex of the wing; some grey-bordered blackish streaks on costa before the apex: hindwing with a broad olive-brown outer marginal band, crossed by three discal sinuous darker lines, the outer line and the veins being black; the subbasal area pink and crossed by two darker pink fasciæ. Thorax and head purplish ferruginous-brown, abdomen with blackish dorsal spots, anal segments with a dorsal blackish band bordered laterally by ferruginous-brown; palpi and legs beneath ferruginous.

Expanse, ♂ $4\frac{3}{4}$, ♀ 6 inches.

Larva grey; granulose; with a subdorsal yellowish-spotted line extending from head to the horn; fifth to last segment with a lateral prominent yellow oblique stripe; horn granulose. Pupa dusky purplish-brown, with paler segmental bands.

"Feeds on Mangifera indica."

Subfamily CHŒROCAMPINÆ.

Imago generally with externally rounded palpi; antennæ generally rather slender; eyes salient; thorax large and prominent; abdomen without an anal tuft.

Larva with the anterior segments retractile, the fifth somewhat abruptly broader; the fifth, and sometimes all the segments laterally ocellated; horn variable; head rather large. (*Butler*.)

Genus DAPHNIS.

Daphnis, Hübner, Verz. bek. Schmett. p. 134 (1818-25) ; Walker, Catal. Lep. Het. B. M. viii. p. 187 (1856).

Forewing long, costa slightly arched; apex acute, exterior margin oblique, posterior margin deeply recurved; cell extending to half the wing; first subcostal emitted at one-third and second at one-eighth before end of the cell, fourth at one-third beyond the cell, fifth immediately beyond the cell; discocellular inwardly oblique, concave below the radial; middle median at one-fifth and lower at two-fifths before end of the cell; submedian and basal branch much recurved: hindwing convexly pointed at the apex, anal angle prominent; cell extending to one-third the wing; a short oblique subcostal spur joined to costal at one-third from the base, two subcostal branches on a short footstalk beyond the cell; discocellular outwardly oblique, radial from above the middle; the middle median at one-sixth and lower at three-sixths before end of the cell. Body very stout, fusiform, abdomen thick; palpi compact, rounded in front; eyes stout; antennæ long, thick (*D. Nerii*).

DAPHNIS NERII (Plate 82, Fig. 1, 1*a*, larva).

Sphinx Nerii, Linnæus, Syst. Nat. i. 2, p. 798 (1766); Cramer, Pap. Exot. iii. pl. 224, fig. D.

Daphnis Nerii, Hübner, Verz. bek. Schmett. p. 134 (1818-25); Stephens, Illustr. Brit. Lep. Haust. iv. p. 405 (1835); Stephens, Catal. Brit. Lep. p. 29 (1850); Walker, Catal. Lep. Het. B. M. viii. p. 188; Moore, Catal. Lep. Mus. E. I. C. i. p. 272, pl. 10, f. 3, 3*a*.

Chærocampa Nerii, Curtis, Brit. Ent. xiii. pl. 626 (1837); Boisd. Spec. Gén. Lep. Het. p. 224.

Green: forewing crossed by a broad dark olive-green waved-bordered transverse subbasal band, a similar coloured narrow discal band with the inner border ill-defined and the outer border irregularly angulated, the apical area also olive-green with a darker angular patch below the apex; a circular basal spot; medial and upper discal interspaces between the bands very pale ochreous olive-green, suffused more or less with pink, the lower discal area being pinkish-grey; a dark olive-green spot at base of wing and some streaks traversing the pale medial area: hindwing dark olive-green, basal area suffused with pinkish-brown; crossed by a medial slender undulated pale fascia. Body olive-green, with pale olivaceous-grey fringe to tegulæ and abdominal segments; tegulæ, a band on front of thorax, basal and anal segments, and lateral oblique streaks darker olive-green; thorax, head, palpi, and legs above olive-grey; antennæ ochreous.

Expanse $3\frac{1}{2}$ to 4 inches.

Larva green, with a prominent whitish bluish-bordered longitudinal lateral band from sixth segment to base of horn; the band traversed by white oval spots; above and below is a clustered series of white spots and others bordering the segments over the back; a large purple-centred black-ringed blind ocellus on side of fourth segment; spiracles small, black; horn yellow. Before changing the larvæ become pale brownish-red, with the back, lateral ocellus, a spot on second segment, and the

head dull black; the white lateral clustered spots showing out prominently. Forms a loose leafy silky covering on the ground. Pupa pale brownish-red, with a black line dividing the wing-cases, speckles on abdomen and large lateral spots.

"Feeds on Oleander (*Nerium odorum*), and on Cinchona."

DAPHNIS HYPOTHOÜS (PLATE 83, FIG. 1, 1*a*, larva).

Sphinx Hypothoüs, Cramer, Pap. Exot. iii. p. 165, pl. 285, fig. F (1782).
Daphnis Hypothoüs, Hübner, Verz. bek. Schmett. p. 134.
Darapsa Hypothoüs, Walker, Catal. Lep. Het. B. M. viii. p. 185; Moore, Catal. Lep. Mus. E. I. C. i. p. 271, pl. 10, fig. 2, 2*a*.
Chærocampa Hypothoüs, Boisduval, Spec. Gén. Lep. Het. p. 226 (1874).

Sap-green: forewing crossed by a broad subbasal dark sap-green curved-bordered band, and a similar coloured discal band with an oblique straight inner border and the outer border angularly produced towards the middle of exterior margin and returning abruptly inward below end of the cell, and again angled acutely on the submedian vein; beyond this band is an outwardly oblique straight narrow sap-green fascia, and on the exterior margin immediately below the apex is a triangular patch; a small circular basal area, medial and discal interspaces between the bands pinkish olivaceous-grey powdered with sap-green scales, these scales also more prominently forming a narrow bordering line to the bands; a small black spot at base of wing, and a transverse streak traversing the pale medial area: hindwing dark brownish sap-green, the outer border dark pinkish-brown, crossed by a waved medial pinkish-grey fascia which extends irregularly up the abdominal margin. Body dark ochreous olive-brown; tegulæ, two basal and the anal segment above dark sap-green, the abdominal segments with a lateral oblique pale-bordered sap-green streak, the segments also narrowly white fringed; middle and front of thorax, head, and palpi dark grey, legs and antennæ greyish-ochreous.

Expanse, ♂ 3½, ♀ 4 inches.

Larva (early stage) pale green—changing to light red—with a subdorsal longitudinal yellow band, below which are parallel bluish-white linear streaks and lower yellow dots on sixth to eleventh segments; a blue ocellated spot on fourth segment; horn smooth. Adult stage: brighter green, with a darker dorsal line, and a purple-red subdorsal band bordered laterally by yellow anteriorly and by white from sixth segment, the lateral spots oblong and prominent, the dots below deeper yellow, the spiracles white, the ocellus blue; front legs red; horn purple-brown with white spiny tubercles; anal plate also purple-brown. Before changing the larvæ are suffused and blotched with dark purple-brown. Forms a loose canopy of leaves. Pupa pale purplish-red, with darker speckles, and large blackish lateral spots.

"Feeds on Cinchona." (*Thwaites*.)

DAPHNIS LAYARDII* (Plate 84, Fig. 1 ♂).

Male. Smaller than *D. Hypothoüs;* the markings dark purple-brown and the intervening pale spaces on forewing of a redder tint, the subbasal band transversely shorter and outwardly more abruptly convex; the discal band with straighter inner and upper portion of the outer border, the lower outer portion less defined and merging into the dark discal interspace.

Expanse $2\frac{7}{8}$ inches.

Genus HIPPOTION.

Hippotion, Hübner, Verz. bek. Schmett. p. 135 (1818-25).
Chærocampa (part), Duponchel, Hist. Nat des Lep. France, Suppl. ii. p. 159 (1835).
Metopsilus (part), Duncan, Nat. Libr. Brit. Moths, p. 154 (1836).

Forewing long, narrow, slightly arched towards end, apex acute, exterior margin very oblique, slightly convex in the middle, posterior margin much recurved; first subcostal emitted at two-fifths and second at one-fifth before end of the cell, fifth immediately beyond end of the cell; discocellular inwardly oblique, slightly bent beyond the middle, radial from the angle; middle median at one-sixth and lower at two-thirds before end of the cell; submedian much recurved from the base, with a lower branch one-fourth from the base: hindwing narrow, apex pointed, anal angle prominent; subcostal spur short; two subcostal branches from end of the cell; discocellular slightly recurved, outwardly oblique, radial from the middle; cell extending more than half the wing; middle median at one-sixth and lower at one-third before end of the cell. Body stout, thorax broad; palpi pointed in front; antennæ short, pectinate; legs long (*H. Celerio*).

HIPPOTION CELERIO (Plate 84, Fig. 4).

Sphinx Celerio, Linn. Syst. Nat. i. 2, p. 800 (1766); Cram. Pap. Exot. ii. pl. 25, f. E.
Hippotion Celerio, Hübner, Verz. bek. Schmett. p. 135; Stephens, Illustr. Haust. iv. p. 405.
Deilephila Celerio, Stephens, Ill. Haust. i. p. 128.
Chærocampa Celerio, Duponchel, Lep. France, Suppl. ii. p. 159 (1835); Walker, Catal. Lep. Het. B. M. viii. p. 128; Moore, Catal. Lep. Mus. E. I. C. i. p. 274, pl. 11, fig. 1, 1*a*; Boisd. Spec. Gén. Lep. Het. p. 238.

Olivaceous-brown: forewing with a broad oblique pale brownish-ochreous band recurving from apex to near base of posterior margin, the band inwardly bordered

* Named after Mr. Edgar L. Layard, who was for several years resident in Ceylon, during Sir Emerson Tennent's governorship, and who made a considerable collection of the Lepidopterous insects of the island. Mr. Layard's collection formed the basis of the List of Insects enumerated in Sir E. Tennent's "History of Ceylon," published in 1859, and contained the type specimens of the numerous new species described by Mr. Walker in the British Museum Catalogues. It would be of great service to the Author if the whereabouts of this collection could be traced, and its contents thus be made available for the present work.

by two silvery-white lines; a black submarginal line, and marginal speckled lunular lines, and three intermediate slender indistinct silvery-white lines; the veins below the cell to oblique line black, and the median to end of cell and subcostal veins lined with silvery-white; a black streak below base of the cell; posterior margin fringed with silvery-white: hindwing broadly crimson at the base, the disc black and traversed by a black-veined pinkish-ochreous fascia; outer border olivaceous-brown; cilia silvery-white. Sides of thorax, head, palpi, and legs above lilacine-white; a dorsal and lateral row of silvery-white duplex streaks.

Expanse $2\frac{1}{2}$ to 3 inches.

Larva green, or purplish-brown. On fifth and sixth segments are two round black ocellated spots dotted with yellow and encircled by a yellow ring, those on fifth segment the largest; horn brown, slender and straight. Feeds on Vine.

Genus XYLOPHANES.

Xylophanes, Hübner, Verz. bek. Schmett. p. 136 (1818-25).

Wings comparatively shorter and broader than in Hippotion (*Celerio*): forewing with the first subcostal emitted at one-third and second at one-sixth before end of the cell, fifth at a short distance beyond end of the cell; discocellular oblique, nearly straight, slightly bent below the radial; middle median at one-sixth and lower at one-half before end of the cell: hindwing similar. Body more robust; palpi less projected and broader in front (*X. Oldenlandiæ*).

XYLOPHANES OLDENLANDIÆ (Plate 85, Fig. 1, 1*a*, larva).

Sphinx Oldenlandiæ, Fabricius, Spec. Ins. ii. p. 148 (1781); Lewin, Prod. Ent. p. 4, pl. 3; Thon, Ent. Archiv. pt. i. p. 6, pl. 1, f. 3.

Chœrocampa Oldenlandiæ, Walker, Catal. Lep. Het. B. M. viii. p. 142 (1856); Moore, Catal. Lep. Mus. E. I. C. i. p. 278, pl. 11, fig. 4, 4*a*; Butler, Trans. Zool. Soc. 1876, p. 559, pl. 91, f. 1; Boisd. Spec. Gén. Lep. Het. p. 242.

Xylophanes Gortys, Hübner, Samml. Ent. Schmett. Zuträge, fig. 513-14 (1825).

Greyish olive-brown: forewing with very prominent darker brown lines extending obliquely from the apex, the three inner lines forming one dark band, the fifth and sixth line curved inward, the fifth broader than the others, the outer lines composed of speckles; a black spot at end of the cell, and some indistinct black-speckled lunular streaks below the subcostal vein; the lower basal area and interspaces between the medial lines pale ochreous-grey: hindwing dusky brown, with a dull pale ochreous-brown submarginal fascia. Sides of thorax, head, palpi, and legs above lilacine-white; middle of thorax grey; two silvery-white longitudinal dorsal lines; tegulæ and sides of abdomen streaked with golden-yellow scales.

Expanse $2\frac{3}{4}$ to 3 inches.

Larva. *Early stage.* 1 inch long; dark purple-brown, with a subdorsal row of yellow dots on second, third, and fourth segments, and a round ocellus on fifth to eleventh segments, the fifth and sixth being dark blue, the others purple-red; fore legs yellow; horn slender, with two yellow dots at its base. *Second stage:* same as preceding, the purple tint being more distinct. *Third stage.* Also the same, with the addition of a lateral row of yellow dots below the ocelli and a dorsal row across the segments, the anterior subdorsal row being yellow and white alternately. *Adult:* paler and browner in colour, minutely speckled with purple-brown; the purple ocelli paler and duller coloured; a pale purplish line replacing the lateral and transverse dots. Pupa pale purplish ochreous-brown, blackish speckled; spiracles black.

"Feeds on Arium." (*Thwaites.*)

XYLOPHANES PRUNOSA (Plate 84, Fig. 2).

Chærocampa prunosa, Butler, P. Z. S. 1875, p. 622.

Greyish purple-brown: forewing with seven dark brown narrow oblique lines, the first, fourth, and sixth most distinct and broadest; the interspaces between second and fourth, and also the lower subbasal area paler coloured; some longitudinal brown streaks from base of wing below the cell: hindwing dusky brown, greyish externally, with a slender submarginal red lunular fascia. Body dusky olive-brown; sides of thorax, head, palpi, and tibiæ above lilacine-grey, middle of thorax and dorsal streak dusky grey; femora and tarsi brown; sides of abdomen above and beneath longitudinally streaked with golden-yellow scales.

Expanse $2\frac{7}{8}$ inches.

XYLOPHANES PINASTRINA (Plate 87, Fig. 2).

Sphinx Pinastrina, Martyn, Psyche, pl. 30, fig. 85 (1797).
Chærocampa Silhetensis, Walker, Catal. Lep. Het. B. M. viii. p. 143; Boisd. Spec. Gén. Lep. Het. p. 240.
Chærocampa bisecta (part), Moore, Catal. Lep. Mus. E. I. C. i. p. 278.

Pale brownish-ochreous: forewing with a very oblique dark olive-brown broad slightly curved band extending from apex to base of posterior margin, the band traversed outwardly by a brown line and bordered by a slender ochreous-white line; three or four indistinct brown-speckled submarginal lines; a black spot at end of the cell: hindwing dusky ochreous-brown, with a broad submarginal pale ochreous fascia. Front of thorax, head and palpi, and tegulæ dark olive-brown; sides of thorax, head, palpi, and legs above lilacine-white; middle of thorax grey; a single silvery-white longitudinal dorsal line; tegulæ and sides of abdomen streaked with golden-yellow scales.

Expanse, ♂ $2\frac{1}{3}$, ♀ $2\frac{1}{8}$ inches.

Genus ISOPLES.

Isoples, Hübner, Verz. bek. Schmett. p. 135 (1818-25).

Forewing narrower than in Hippotion (*Celerio*); first subcostal emitted at one-third and second at one-sixth before end of the cell, fifth from end of the cell; upper end of the cell extending more than half the wing; discocellular slightly oblique and concave; middle median at one-sixth and lower at one-half before end of the cell: hindwing very narrow; cell extending nearly one-half the wing; two subcostal branches from end of the cell. Body less robust; head narrower; palpi more pointed in front; antennæ shorter (*I. Theylia*).

ISOPLES THEYLIA (Plate 84, Fig. 5).

Sphinx Theylia, Linnæus, Mus. Lud. Ulr. p. 360 (1874); Syst. Nat. i. 2, p. 803; Clerck, Icones, pl. 46, fig. 7, 8; Cram. Pap. Exot. i. p. 58, pl. 226, f. E.
Isoples Theylia, Hübner, Verz. bek. Schmett. p. 135.
Chœrocampa Theylia, Butler, Trans. Zool. Soc. 1876, p. 556.
Sphinx Boerhaviæ, Fabricius, Syst. Ent. p. 542 (1775); Sulzer, Gesch. Ins. p. 40, pl. 20, f. 3.
Sphinx octopunctata, Gmelin, Syst. Nat. i. 5, p. 2386; Zschach, p. 95, No. 286.

Forewing pale brownish ochreous-grey, with nine brown oblique lines extending from the apex, the two inner lines darkest and confluent, the fifth and upper part of sixth also darker and confluent, the outer lines of a more speckled character; a black dot at lower end of the cell, and another at base of the wing: hindwing vermillion-red, with a narrow dusky brown marginal band. Body olivaceous ochreous-brown; tegulæ and front of thorax, head, palpi, and legs above pale lilacine-grey; antennæ brownish-ochreous; middle of thorax ochreous-grey; sides of abdomen and tegulæ streaked with golden-yellow scales.

Expanse 2 to 2¼ inches.

ISOPLES RAFFLESII (Plate 84, Fig. 3).

Chœrocampa Rafflesii, Butler, Trans. Zool. Soc. 1876, p. 556.
Sphinx Theylia, Cramer, Pap. Exot. i. pl. 226, f. F.

Comparatively larger, more robust, and darker coloured than *I. Theylia*: forewing reddish or purplish ochreous-brown; markings similar but more prominent: hindwing of a deeper red tint, the marginal band paler and of a purplish-brown. Body much darker throughout.

Expanse 2⅜ to 2⅝ inches.

Genus HATHIA.

Forewing acutely pointed at the apex, exterior margin long, very oblique, slightly convex; first subcostal emitted at one-third and second at one-ninth before end of the cell, fifth from end of the cell; discocellular slightly oblique and concave;

cell extending fully half the wing; middle median at one-sixth and lower at one-half; submedian much arched, basal branch long: hindwing short, rather broad; two subcostals from end of the cell; discocellular outwardly recurved; cell short; middle median at one-sixth, lower at one-half. Body fusiform; thorax stout; antennæ thicker than in Theretra (*Nessus*). (*H. Clotho.*)

HATHIA CLOTHO (Plate 87, Fig. 1).

Sphinx Clotho, Drury, Illustr. Exot. Ins. ii. p. 48, pl. 28, fig. 1 (1773).
Chærocampa Clotho, Walker, Catal. Lep. B. M. viii. p. 141 (1856); Butler, Trans. Zool. Soc. 1876, p. 561.

Pale olive-brown: forewing with a slender brown band from apex to middle of posterior margin, three parallel inner very indistinct slender lines; outer border of wing slightly brown speckled; a black dot at end of the cell, and a black hairy spot at base of wing: hindwing dark black, the costal border and a short broad irregular fascia from anal angle dull flesh colour. Thorax, head, and palpi above darker olive-brown; a large black basal spot on each side of abdomen; sides of thorax, head, palpi, and tibia above flesh colour.

Expanse $3\frac{1}{4}$ to $3\frac{3}{4}$ inches.

HATHIA LUCASII (Plate 86, Fig. 3).

Chærocampa Lucasii, Walker, Catal. Lep. Het. B. M. viii. p. 141 (1856); Moore, Catal. Lep. Mus. E. I. C. i. p. 277, pl. 11, fig. 3, 3*a*; Boisduval, Spec. Gén. Lep. Het. p. 254; Butler, Trans. Zool. Soc. 1876, p. 560.

Pale dull ochreous-brown: forewing sparsely speckled with dusky brown scales; crossed by four oblique dusky brown equidistant lines extending obliquely from apex to middle of posterior margin, the two middle lines indistinct, the inner line broadest and slightly diffused in the middle, the outer line slightly black streaked on the veins; two or three speckled lines along outer margin; a black dot at end of the cell, and a less distinct dot near its base; a black spot at base of posterior margin: hindwing dusky black, the costal border and a short broad irregular fascia from anal angle pale ochreous-brown. Body darker ochreous-brown; sides of abdomen paler; a dusky black lateral spot at base of abdomen; sides of thorax, head, and palpi, and legs above lilacine-white.

Expanse $2\frac{1}{2}$ to 3 inches.

HATHIA TENEBROSA (Plate 86, Fig. 2, 2*a*, larva).

Chærocampa tenebrosa, Moore, P. Z. S. 1877, p. 595.

Allied to *C. Lucasii*. Comparatively larger, and darker coloured: forewing dull greyish ochreous-brown; with similar markings, the oblique lines being somewhat curved in crossing the disc: hindwing blacker, with less pale anal streak.

Expanse 3 inches.

Larva pale green, with a large lateral ocellus composed of a crimson and white-bordered black spot ringed with black; a pale bordered purple subdorsal band extending from the ocellus to base of the horn; spiracles black ringed. Pupa pale ochreous, with longitudinal dusky streaks, darker spiracles, and brown segmental bands.

"Feeds on Leea staphylea (Vitaceæ)." (*Thwaites.*)

Genus GNATHOTHLIBUS.

*Chromis,** Hübner, Verz. bek. Schmett. p. 138 (1818-25).
Gnathothlibus, Wallengren, Kongl. Vetens. Acad. Forhandl. 1858, p. 137.

Forewing less triangular in form than in Hathia; costa more arched at the end, exterior margin less oblique, posterior margin longer and more recurved; first subcostal emitted at two-fifths and second at one-fifth before end of the cell, fifth from immediately beyond end of the cell; discocellular obliquely concave; middle median at one-fifth and lower at three-fifths before end of the cell: hindwing narrow; two subcostal branches on a short footstalk beyond end of the cell; discocellular outwardly oblique, upper end bent inward below the middle, radial from the angle; middle median at one-sixth and lower at three-sixths before end of the cell; abdomen shorter and thicker than in *Hathia;* head short; antennæ stout. (Type, *Erotus.*)

GNATHOTHLIBUS PALLICOSTA (PLATE 84, FIG. 6).

Chærocampa pallicosta, Walker, Catal. Lep. Het. B. M. viii. p. 145 (1856); Boisduval Spec. Gén. Lep. Het. p. 251; Butler, Trans. Zool. Soc. 1876, p. 566, *id.* Illust. Types, Lep. Het. iii. pl. 41, f. 2.

Forewing dark purplish-ferruginous; costal edge ferruginous-yellow; posterior margin fringed with pure white; an oblique discal glaucous-bordered lunular fascia and two similar but less distinct outer fasciæ, a lunate white spot at end of the cell: hindwing red, costal border yellowish; cilia pure white. Thorax dark purplish-ferruginous; abdomen, sides of thorax, head, and palpi beneath, a central streak on thorax, and legs in front, white.

Expanse, ♂ 3, ♀ 3¼ inches.

Genus THERETRA.

Theretra, Hübner, Verz. bek. Schmett. p. 135 (1818-25).

Forewing long, costa gently arched near the end, apex acute, slightly falcate at tip; exterior margin oblique, wavy, and slightly convex; posterior margin recurved; first subcostal emitted at nearly one-fourth, and second at one-eighth before end of the cell, fifth from some distance beyond the cell; discocellular inwardly oblique,

* Preoccupied by Cuvier for a genus of Fishes, in 1817.

concave, radial from below the middle; cell extending nearly half the wing; middle median at one-fifth and lower at three-fifths before end of the cell; submedian recurved, basal branch long: hindwing long, apex produced and pointed, exterior margin long, uneven; cell short; subcostal spur very oblique, one-third from the base, two subcostal branches on a footstalk some distance beyond end of the cell; discocellular outwardly oblique, upper end concave, radial from the middle; the middle median at one-fifth and lower beyond one-third before end of the cell. Body large, very robust, abdomen long; head large, projected much in front; palpi bluntly projected in front; antennæ slender (*T. Nessus*).

THERETRA NESSUS (Plate 86, Fig. 1).

Sphinx Nessus, Drury, Illust. Exot. Ins. ii. p. 46, pl. 27, fig. 1 (1773); Cramer, Pap. Exot. iii. pl. 226, fig. D.

Chærocampa Nessus, Walker, Catal. Lep. Het. B. M. viii. p. 140 (1856); Moore, Catal. Lep. Mus. E. I. C. i. p. 276, pl. 11, f. 2, 2*a*; Butler, Trans. Zool. Soc. 1876, p. 655.

Sphinx equestris, Fabricius, Ent. Syst. iii. p. 365 (1793).

Theretra equestris, Hübner, Verz. bek. Schmett. p. 135.

Ochreous olive-brown: forewing tinged with olive-green along costal border; two discal contiguous narrow brown slightly irregular lines extending from apex to middle of posterior margin, the inner line bent inward to the costa and the outer line to the apical point, followed by a parallel contiguous outer discal line which becomes indistinct at its lower end, a broader suffused fascia, and a submarginal slender waved line; before the inner line is a less distinct slender fascia which becomes more prominent and sinuous at the costal end; a blackish lunular spot at end of the cell; a black streak fringed with white at base of posterior margin: hindwing black basally, olivaceous-brown externally, traversed by an irregular brownish-ochreous submarginal fascia, which extends broadly from anal angle. Thorax, head, and palpi bright ochreous-brown; base of abdomen and a broad dorsal band dark olive-green, sides of abdomen golden-yellow; sides of thorax and head greyish-white; legs olive-brown, white beneath; antennæ olive-brown above, white beneath.

"Larva feeds on Yam (Dioscorea)." (*Gregory.*)

Genus PERGESA.

Pergesa, Walker, Catal. Lep. Het. B. M. viii. p. 149 (1856).

Oreus (part), Hübner.

Forewing narrow, arched towards the end, apex falcate, exterior margin oblique and convex in middle; first subcostal emitted at two-sixths and second at one-sixth before end of the cell, fifth from immediately beyond end of the cell; discocellular inwardly oblique, angled inward below the radial; cell extending to half the wing;

middle median at one-fifth and lower at three-fifths; submedian basal branch short: hindwing narrow, apex convexly pointed, exterior margin very oblique, abdominal margin very short; cell extending to one-third the wing; subcostal spur short; two subcostal branches on a footstalk at a little distance beyond the cell; discocellular outwardly oblique, angled inward above the radial; middle median at one-sixth and lower at three-sixths before end of the cell. Body long, fusiform, abdomen slender; second joint of palpi broadly triangular, pointed in front, compact, first joint laxly clothed; antennæ moderately long, slender; legs very long. (Type, *P. Acteus.*)

PERGESA ACTEUS (Plate 88, Fig. 1, 1*a*, larva).

Sphinx Acteus, Cramer, Pap. Exot. iii. p. 93, pl. 248, fig. A (1782).
Oreus Acteus, Hübner, Verz. bek. Schmett. p. 136.
Pergesa Acteus, Walker, Catal. Lep. Het. B. M. viii. p. 153 (1856); Moore, Catal. Lep. Mus. E.I.C. i. p. 272, pl. 10, fig. 1, 1*a* (1857).
Chærocampa Acteus, Boisduval, Spec. Gén. Lep. Het. p. 257.

Forewing olive-green, the costal margin pale pinkish olive-brown, the exterior margin with a broad purplish-brown band having an irregular inner border and longitudinally traversed by pale lunules, the olive-green middle area of the wing obliquely traversed from the apex to middle of posterior margin by darker green lines, and a broader inner darker parallel fascia which increases in width posteriorly; a black dot at lower end of the cell: hindwing dusky purplish-brown, with a short reddish-ochreous fascia from the anal angle; cilia ochreous. Body dark olive-green, a purplish-grey dorsal band on thorax and abdomen; sides of thorax, head, palpi, and legs above purplish-grey; sides of abdomen reddish-ochreous, yellowish beneath.

Expanse $2\frac{1}{2}$ to $2\frac{3}{4}$ inches.

Larva pale olivaceous-green; on fifth segment a large lateral blue ocellus ringed with white, green, and yellow; on sixth to eleventh segments an oval green-ringed yellowish oblique lateral spot, below each of which is an oblique whitish stripe; a dorsal blue line on anterior segments, and a pale waved subdorsal line from the ocellus to head; horn pink; spiracles white.

"Feeds on Arum orixense."

Genus ACOSMERYX.

Acosmeryx, Boisduval, Spec. Gén. Lep. Het. p. 214 (1874); Butler, P. Z. S. 1875, p. 245.

Forewing: costa slightly arched, apex pointed, exterior margin oblique, in the male slightly sinuous and angulated outward below the apex and again in the middle; cell not extending to half the wing; first subcostal at one-third and second at one-sixth, fourth at one-fourth beyond the cell and fifth from end of the cell; discocellular convex, inwardly oblique, radial from below the middle; the middle median at one-sixth and lower at one-half before end of the cell; submedian and basal branch much

recurved: hindwing short, apex pointed, exterior margin slightly sinuous and angular in male; subcostal spur at one-half from base of cell, two subcostal branches from end of the cell; discocellular much recurved outward, radial from the middle; cell short, extending one-third the wing; middle median at one-seventh and lower at three-sevenths before end of the cell; submedian and internal veins slightly curved. Body very robust, male with a slight tuft; head slightly tufted between the antennæ; palpi convex in front; legs and antennæ moderate.

ACOSMERYX CINEREA (Plate 89, Fig. 2, *2a*, larva).

Acosmeryx Cinerea, Butler, Proc. Zool. Soc. 1875, p. 245.

Dark grey: forewing with three pale brown transverse subbasal equidistant curved narrow bands, three discal and a less distinct submarginal sinuous band, a broad oblique brown fascia crossing the latter from the costa to posterior angle, a brown zigzag streak also below the apex, and a similar brighter streak from the costa before the apex; a brown spot at end of the cell: hindwing with the apical area broadly brown. Thorax streaked above, and abdomen with oblique lateral brown streaks; palpi and legs above brown.

Expanse $3\frac{1}{4}$ to $3\frac{1}{2}$ inches.

Larva pale olive-green, dorsally dotted with darker green; head small, anterior segments depressed from the fifth towards the head, dilated laterally and edged by a yellow-bordered black band ending at the ocellated spiracle on sides of fifth segment; a pale-bordered purple subdorsal band extending from head to horn; below the band the green is of an emerald tint and numerously white-dotted; the spiracles black ringed; below them on sixth to eleventh segment is an oblique green stripe; horn purple, dotted with black; on fifth to eleventh segment is a dorsal purple-brown yellowish-bordered mark. Pupa thick, blunt, spiked at each end; reddish, paler beneath, with black spiracles, and abdominal rings.

"Feeds on Dillenia." (*Thwaites.*)

Genus PANACRA.

Panacra, Walker, Catal. Lep. Het. B. M. viii. p. 154 (1856); Boisd. Spec. Gén. Lep. Het. p. 285.

Forewing narrow, apex falcate; exterior margin convex in the middle, slightly uneven; posterior margin recurved, first subcostal emitted at one-third, and second at one-sixth before end of the cell, fourth at one-third beyond the cell and fifth from immediately beyond the end; cell extending to half the wing; discocellular obliquely concave, radial from near lower end; middle median at one-fifth and lower at three-fifths before end of the cell; submedian and its basal branch very close together: hindwing short, narrow, apex convexly pointed; exterior margin recurved, pointed at anal angle; cell not extending to half the wing; subcostal spur emitted at beyond

one-half from base of the cell, two subcostal branches from end of the cell, upper much curved at its base; discocellular deeply recurved outward, radial from the middle; the middle median at one-fifth and lower at two-fifths before end of the cell; submedian and internal slightly curved. Body stout; palpi pointed in front; abdomen short. (*Type*, P. Vigil.)

PANACRA VIGIL (Plate 87, Fig. 3, 3 *a*, *b*, larva).

Sphinx (*Deilephila*) *Vigil*, Guerin, in Delessert's Voy. dans l'Inde, ii. p. 80, pl. 23, f. 1 (1843).
Panacra Vigil, Moore, Catal. Lep. Mus. E. I. C. i. p. 270; Butler, Trans. Zool. Soc. 1876, p. 551.
Panacra lignaria (part), Walker, Catal. Lep. Het. B. M. viii. p. 156 (1856); Boisd. Spec. Gén. Lep. p. 288.
Sphinx phœnyx, Herr. Schäffer, Samm. Aussereurop. Schmett. pl. 83, f. 478 (1850-8).

Dark greyish-brown: forewing with a broad pale ochreous-grey band obliquely undulating from apex to middle of posterior margin, the pale band traversed by four slender wavy brown lines and inwardly bordered by a dark brown irregular fascia; a dark brown streak from the apex, and speckled lunular marks along exterior margin; costal area grey and brown speckled; a black streak below the cell, a spot at end of the cell, and base of lower subcostal branch bordered with pale ochreous-grey: hindwing dusky brown, with a slight pinkish-ochreous lunular fascia bordered outwardly with black. Cilia of both wings alternately pale ochreous-grey and dark brown. Thorax above grey streaked; side of thorax, head, palpi, and legs in front lilacine-grey; abdomen with dark brown dorsal streak and a lateral row of pale ochreous-grey segmental streaks.

Expanse $2\frac{2}{8}$ to $2\frac{5}{8}$ inches.

Larva pale green, with a small round yellow blue-ringed ocellus, and a subdorsal whitish-bordered blue-dotted green longitudinal line to base of horn; spiracles small and centred with reddish-brown; horn purplish. *Another stage:* pale brownish-ochreous, with more numerous and distinct dorsal dots, and prominent black-centred ocelli. Pupa pale brownish-ochreous, indistinctly brown streaked; spiracles blackish.

"Feeds on *Pisonia aculeata*."

Genus ANGONYX.

Angonyx, Boisduval, Spec. Gén. Lep. Het. p. 317 (1874).

Forewing arched towards the end, apex acute, exterior margin oblique and convexly angular below the apex, posterior angle pointed; first subcostal nearly one-half and second at one-seventh before end of the cell; discocellular inwardly oblique, slightly concave below the radial; cell extending more than half length of the wing; middle median at one-fifth and lower at three-fifths before end of the cell; submedian and its basal branch much recurved: hindwing short; apex very convex, exterior margin angular towards the end; cell short, upper end extending

to one-third the wing; discocellular acutely bent outward in the middle, radial from below the angle: middle median at one-sixth and lower at one-third before end of the cell. Body stout; palpi projected in front; antennæ long.

ANGONYX TESTACEA (Plate 89, Fig. 1).

Perigonia testacea, Walker, Catal. Lep. Het. B. M. viii. p. 102 (1856), ♂.
Angonyx Emilia, Boisduval, Spec. Gén. Lep. Het. p. 318, pl. 8, fig. 1 (1874), ♂.
Panacra Ella, Butler, Proc. Zool. Soc. 1875, p. 246; Trans. Zool. Soc. 1876, pl. 92, f. 7, ♀.

Dark olive-green: forewing with a medial transverse obliquely straight pale purple fascia, terminating at upper end of the cell in a purple-grey spot, the inner border of the fascia being sharply defined and the outer border diffused; an indistinct submarginal zigzag brown fascia, and an oblique dark olive-brown shade before the apex, bordered outwardly at the costal end by a slender purple streak; cilia streaked with dark brown: hindwing dusky red, traversed by a paler red fascia, which is bordered above anal angle with a grey-speckled lunule. Thorax, head, and palpi dark olive-green; abdomen paler, the sides tinged with red; legs tinged with red.

Expanse 2 to $2\frac{1}{2}$ inches.

The descriptions of both Mr. Walker and Mr. Butler were taken from unique specimens that are much faded, and therefore do not state the natural colours of this beautiful insect.

Subfamily MACROGLOSSINÆ.

Imago generally with externally angulated palpi; antennæ often gradually thicker from the base to the apex; thorax large and prominent; abdomen of male always with a more or less developed anal tuft of hair-scales.

Larva with the anterior segments tapering towards the head, retractile; horn long and curved; head rather small. (*Butler.*)

Genus RHAMPHOSCHISMA.

Rhamphoschisma, Felder, Reise der Novara, Lep. iv. pl. 75, f. 7 (1874).

Forewing comparatively shorter and broader than in typical Macroglossa (*M. Stellatarum*): hingwing also broader, exterior margin more angular. Venation similar. Body more robust, thorax and head longer, the palpi much more lengthened, pointed, and projected in front; antennæ uniformly slender; abdomen with broad lateral and large anal tufts; hind tibia broadly pilose at the sides. (*Type*, R. rectifascia.)

RHAMPHOSCHISMA IMPERATOR (Plate 90, Fig. 1).

Macroglossa imperator, Butler, Proc. Zool. Soc. 1875, p. 243, pl. 37, fig. 4.

Forewing purplish greyish-brown, crossed by a broad black triangular antemedial band, the outer border of which is straight and erect, and a broad postmedial irregular shaped band with a slightly recurved inner border, the outer border being extended outward below the apex to exterior margin, and thence recurving to posterior margin : hindwing purple-brown, crossed by a broad orange-yellow band. Body purplish grey-brown, with a broad purple-brown streak extending from tip of palpi to base of abdomen, and a similar streak down each side of thorax; abdomen with lateral orange-yellow spots and subdorsal black spots; anal tuft black; palpi beneath greyish-white; legs purple-grey.

Expanse 2½ inches.

RHAMPHOSCHISMA RECTIFASCIA (Plate 90, Fig. 2).

Rhamphoschisma rectifascia, Felder, Reise Novara, Lep. iv. pl. 75, f. 7 (1874).
Macroglossa rectifascia, Boisd. Spec. Gén. Lep. Het. p. 353.

Forewing purple-brown, with a broad black antemedial band, the outer border of which is straight and slightly oblique, the basal area of the wing being dark slaty-grey; a postmedial blackish diffused band which is darkest at the costal end and extends itself below the apex to exterior margin, the medial interspace being pale purple-brown : hindwing purplish-black, crossed by a broad medial orange-yellow band. Palpi, head, and sides of thorax above dark slaty-grey; middle of thorax, and abdomen purple-brown; abdomen with lateral orange-yellow spots and subdorsal black spots, anal tuft black tipped with purple-brown; palpi beneath white; legs reddish-brown.

Expanse 2¼ inches.

RHAMPHOSCHISMA DIVERGENS (Plate 92, Fig. 2).

Macroglossa divergens, Walker, Catal. Lep. Het. B. M. viii. p. 94 (1856); Boisduval, Spec. Gén. Lep. Het. p. 355.

Forewing purplish greyish-brown, with a prominent black antemedial transverse band, the outer border of which is erect and straight, and the inner border deeply concave, the costal end being narrowest; three postmedial undulated equidistant black lines, the middle line being broadest and most distinct; a black streak below the apex; the medial transverse interspace pale purple-grey: hindwing dark purple-brown, crossed by a narrow orange-yellow band. Middle of thorax and tegulæ longitudinally streaked with dark purple-brown; abdomen purple-brown, with orange-yellow lateral spots.

Expanse 2 inches.

RHAMPHOSCHISMA NIGRIFASCIATA (Plate 92, Fig. 1).

Macroglossa nigrifasciata, Butler, Proc. Zool. Soc. 1875, p. 241, pl. 37, fig. 3.

Forewing purplish greyish-brown, crossed by a prominent black erect antemedial band which is narrowest at the costal end and the borders slightly concave; a less prominent postmedial recurved band which is angulated outwardly near the costal end; a very indistinct submarginal line, and a black spot below the apex: hindwing with a narrow black outer border and basal streaks, and a very broad orange-yellow band. Body olivaceous-brown; palpi beneath, and legs greyish-brown; abdomen with lateral orange-yellow spots; anal tuft interspersed with olive-brown.

Expanse 2 inches.

RHAMPHOSCHISMA GLAUCOPTERA (Plate 91, Fig. 2).

Macroglossa glaucoptera, Butler, Proc. Zool. Soc. 1875, p. 241, pl. 36, f. 9.

Forewing dark purplish-grey, crossed by a nearly erect antemedial dark purple-brown band which is broadest on posterior margin; a slightly recurved erect purple-brown postmedial band, and two recurved submarginal lines: hindwing dark purple-brown, crossed by a broad orange-yellow band. Body dull ferruginous olive-brown; middle of thorax, head, and palpi above purplish-grey; palpi beneath, and legs grey; anal tuft purple-black.

Expanse 2 inches.

Genus MACROGLOSSA.

Macroglossum, Scopoli, Ins. Carn. p. 414 (1777).
Macroglossa, Ochsenheimer, Eur. Schmett. iv. p. 41 (1816); Walker; Boisd.
Bombylia, Hübner, Tentamen, p. 1 (1806).
Psithyros, Hübner, Verz. bek. Schmett. p. 132 (1818-25).

Forewing narrow, elongated; apex pointed, exterior margin oblique, slightly convex; first subcostal emitted at one-third and second at one-tenth before end of the cell, fifth from end of the cell; discocellular very oblique, slightly bent near lower end, radial from below the middle; cell extending to half the wing; middle median at one-seventh and lower at four-sevenths before end of the cell; submedian much arched, lower branch at one-fourth from the base: hindwing short, exterior margin very oblique, recurved; cell extending one-third the wing, costal vein slightly waved; subcostal spur at one-third from base of the cell, two subcostal branches from end of the cell; discocellular outwardly oblique, slightly recurved, radial from the middle; upper and middle median from angles at end of the cell, lower median at one-half before the end; submedian and internal vein curved Body stout, abdomen broad, tufted at the side, anal tuft large and broad; palpi pointed in front; legs rather short, thick; antennæ short, thickly clavate, finely serrate-pectinate, tip slender and setose.

MACROGLOSSA PROXIMA (Plate 91, Fig. 1 *a*, *b*, larva).

Macroglossa proxima, Butler, Proc. Zool. Soc. 1875, p. 4, pl. 1, f. 1.

Forewing dark purplish olivaceous-brown; crossed by two very indistinct antemedial brown lines, and three waved postmedial lines: hindwing dark purple-brown, crossed by a bright orange-yellow band. Body dark olivaceous-brown; abdomen with three orange-yellow lateral spots; tuft blackish, with reddish tip; palpi beneath whitish; legs reddish-brown.

Expanse $2\frac{5}{8}$ inches.

Larva dark violet-brown, dorsally white dotted; a subdorsal anterior and posterior yellow streak; spiracles duller coloured, and a white lower spot on eighth to twelfth segment; horn long, recurved, tuberculated. (*Another stage.*) Pale violet-brown, with yellowish and olive-brown transverse dorsal lines and yellow lateral spots; a purple-brown dorsal line, the ends being ochreous; spiracles yellow-bordered, and a lower yellow spot on ninth to eleventh segment; horn short, tuberculated. (*Adult stage.*) Dark purple-brown, yellow dotted; a pale ochreous dorsal fascia; large pinkish lateral spots splashed with yellow; horn short, tuberculated. Pupa pale purplish-ochreous, black dotted; spiracles and lateral streaks on wing-cases black.

" Feeds on Morinda umbellata." (*Thwaites.*)

MACROGLOSSA TAXICOLOR (Plate 90, Fig. 3, 3*a*, larva).

Macroglossa taxicolor, Moore, Proc. Zool. Soc. 1879, p. 387.

Forewing grey-brown; crossed by a broad antemedial aud a postmedial ferruginous olivaceous-brown band, the inner band narrowest at the costal end, the outer band angular on its external border, and broadest at the costal end; a very indistinct submarginal dusky black waved line, and a prominent black subapical spot: hindwing dark ochreous-brown, crossed by a broad orange-yellow band. Body ferruginous olive-brown, with black-bordered orange-yellow lateral spots; anal tuft purplish-black.

Expanse $1\frac{3}{4}$ to 2 inches.

Larva. (*Early stage*)—Olive-yellow, greenish beneath; minutely white dotted; a subdorsal row of black slender linear streaks, the caudal streak white-bordered beneath; spiracles white bordered with black. (*Adult*)—Green, darker spotted; an indistinct darker subdorsal line ending in a yellow streak at base of horn. Pupa pale olivaceous ochreous-yellow; head and wing-cases minutely black streaked; spiracles large, black.

" Feeds on Memecylon." (*Thwaites.*)

MACROGLOSSA INSIPIDA (Plate 92, Fig. 3 *a*, *b*, larva).

Macroglossa insipida, Butler, Proc. Zool. Soc. 1875, p. 242, ♀.

Forewing purplish slate-colour; crossed by two short basal dull purple-brown bands, a curved broader complete brighter-coloured antemedial band, two recurved postmedial dusky black lines, and two less distinct waved submarginal lines, the latter interrupted below the apex by a short black quadrate streak; interspace between the postmedial lines, and above the quadrate spot washed with purple-brown: hindwing dark purple-brown, crossed by a broad orange-yellow band. Thorax, head, palpi, and legs above purplish slate-colour; tegulæ purplish-brown edged with grey; abdomen paler purplish-brown with orange-yellow lateral spots and purplish-black anal tuft; palpi beneath white.

Expanse $1\frac{5}{12}$ to $1\frac{7}{12}$ inch.

Larva. (*Early stage*)—Dull dirty yellowish olive-green, dotted with darker colour; with a dark sap-green subdorsal line and lateral stripes; horn dusky. (*Adult*)—Pale red, with dark purple-red dots; a duplex subdorsal line, and lateral stripes; horn black. Pupa pale reddish-ochreous, minutely black dotted; spiracles black.

MACROGLOSSA AFFICTITIA (Plate 93, Fig. 3).

Macroglossa affictitia, Butler, Proc. Zool. Soc. 1875, p. 240, pl. 36, fig. 7.

Forewing purplish-brown; crossed by an indistinctly darker antemedial band and three deeply waved postmedial lines obliquely crossed by a darker shade; a dark spot also below the apex: hindwing dark ferruginous-brown, crossed by a distinct bright ferruginous band. Body olivaceous greyish-brown; abdomen with orange-yellow lateral spots, and slight subdorsal greyish-black spots, tuft greyish-black; palpi whitish beneath, legs greyish-brown.

Expanse 2 inches.

Nearest allied to *M. Vialis*.

MACROGLOSSA VIALIS (Plate 93, Fig. 2).

Macroglossa Vialis, Butler, Proc. Zool. Soc. 1875, p. 240, pl. 36, f. 5.

Allied to *M. gyrans*. Comparatively smaller: forewing similarly marked, except that the two antemedial lines are interspaced with black and forming a conspicuous band, the contiguous transverse area being pale purplish-grey: hindwing deeper ferruginous-red, with a slight dusky brown base and distinct broad marginal band.

Expanse $1\frac{4}{10}$ to $1\frac{6}{10}$ inch.

MACROGLOSSA GYRANS (Plate 93, Fig. 1).

Macroglossa Gyrans, Walker, Catal. Lep. Het. B. M. viii. p. 91 (1856); Boisduval, Spec. Gén. Lep. Het. p. 336.

Forewing greyish purplish-brown, crossed by two black subbasal and two antemedial undulated lines, three postmedial outwardly angulated lines; the subbasal

and outer postmedial line indistinct; a slight black short streak below the apex: hindwing ferruginous-red, with slightly darker brown marginal border. Body greyish purplish-brown; sides of three basal segments ferruginous-red, anal segments black streaked; tuft black, fringed with white at the base.

Expanse $1\frac{4}{8}$ to $1\frac{6}{8}$ inch.

Genus CEPHONODES.

Cephonodes, Hübner, Verz. bek. Schmett. p. 131 (1818–25).
Potidæa, Wallengren, Öfvers. Kongl. Vet. Akad. Forhandl. 1858, p. 139.
Sesia (part), Fabricius.

Forewing shorter than in Hemaris (*H. fuciformis*), costa much less arched towards end, exterior margin long, very oblique, posterior margin shorter; second subcostal emitted immediately before end of the cell, fifth at some distance beyond the end; no scaled pseudo-vein emitted within the cell; submedian much arched, its basal branch confluent: hindwing broader, apex more rounded; cell very short, extending only to about one-eighth of the wing; two subcostal branches on a long footstalk beyond the cell; discocellular inwardly concave, radial from the middle; two upper medians on a very long footstalk one-third beyond the cell; lower at a short distance before end of the cell; submedian and internal vein curved. Body large, broad, very compactly clothed; palpi clothed with adpressed scales; antennæ slender. (*Type*, C. Hylas.)

CEPHONODES HYLAS (Plate 93, Fig. 4 *a, b*, larva).

Sphinx Hylas, Linnæus, Mant. i. p. 539 (1771).
Sesia Hylas, Fabricius, Ent. Syst. iii. 1, p. 379 (1793); Walker, Catal. Lep. Het. B. M. viii. p. 84; Moore, Catal. Lep. Mus. E. I. C. i. p. 260, pl. 8, f. 1, 1 *a*.
Cephonodes Hylas, Hübner, Verz. bek. Schmett. p. 131.
Sphinx Picus, Cramer, Pap. Exot. ii. p. 83, pl. 148, fig. B (1779).

Wings transparent, hyaline, purplish-olivaceous; the veins, costal border, and a very slender apical band purplish-black; base of anterior and posterior margins of both wings covered with olive-green scales. Body olive-green, anal segments yellowish-olive, the fourth and frequently also the fifth anal segment banded with chestnut-red; each segment more or less black margined and fringed with white; anal lateral tuft black; palpi white, streaked with black in front; legs ochreous-white, streaked with brown above; tarsi brown.

Expanse $2\frac{1}{4}$ to $2\frac{1}{2}$ inches.

Larva. (*Early stage*)—Pale bluish-green; second segment yellow dotted; a subdorsal black-dotted duplex line; a lateral row of black transverse spots; spiracles and abdominal line, and legs brownish-ochreous; head blue-green; horn with black granular dots. (*Adult*)—Brighter green, with a white-bordered blue dorsal line, and

whitish subdorsal line ending in a yellow streak at base of horn; head and spiracles blue. Pupa pale violet brown.

"Feeds on Gardenia." (*Thwaites.*)

Family AGARISTIDÆ.

Forewing long; hindwing rather broad. Antennæ long, slender, thickened towards the tip. Flight diurnal.

Larva elongate, somewhat antenuating anteriorly; head small; slightly pilose. Pupa in a slight cocoon beneath surface of the earth.

Genus ÆGOCERA.

Ægocera Latreille, Gen. Crust. et Ins. iv. p. 211 (1809); Walker, Catal. Lep. Het. B. M. i. p. 55; Boisd. Monogr. Agar. p. 24.

Wings small: forewing elongated; costal and subcostal veins wide apart; first subcostal emitted at one-third and second at one-sixth before end of the cell, second trifid; fifth from end of the cell and touching third near its base, sixth from below the fifth at a short distance beyond the cell; discocellnlar angulated outward below the middle, upper end concave, radial from the angle; two upper medians from angles at end of the cell, lower at one-sixth before the end; submedian recurved from the base: hindwing rather broad; costal and subcostal joined together to one-fourth from their base; two subcostal branches from end of the cell; discocellnlar deeply concave, radial from the middle; two upper medians from end of the cell, lower at one-eighth before the end; submedian and internal vein straight. Body moderately long, slender, tu d at the apex; head small, pilose in front; palpi slightly ascending, first and second joints thickly pilose beneath, third joint long, cylindrical, compactly scaled; antennæ long, thickened towards the tip; femora and tibiæ moderately pilose beneath.

ÆGOCERA VENULIA (Plate 94, Fig. 1).

Phalæna Venulia, Cramer, Pap. Exot. ii. p. 107, pl. 165, f. D (1779).

Bombyx Venulia, Fabricius, Suppl. Ent. p. 158.

Ægocera Venulia, Latreille, Gen. Crust. et Ins. iv. p. 211; Crochard, edit. Règn. Anim. Ins. pl. 148, f. 1; Boisduval, Monogr. Zyg. p. 13, pl. 1, f. 3; Monogr. Agar. p. 25; Walker, Catal. Lep. Het. B. M. i. p. 55.

Forewing brown, densely speckled with grey scales; traversed by a longitudinal yellowish-white angnlated band, which is indented at the upper end of the cell, and terminates before reaching the exterior margin, the band is also bordered outwardly by a red streak, and encloses a black spot below the cell; a red line along exterior

margin: hindwing orange-yellow, with a reddish-brown marginal band, and a blackish dentate discocellular spot. Head and thorax hoary-brown, longitudinally streaked with yellowish-white; abdomen orange-yellow, with slight black dorsal spots; palpi yellowish-white, with the second joint at the side, and tip of third joint black; legs orange-yellow, with black bands; antennæ black.

Expanse, ♂ $1\frac{1}{10}$, ♀ $1\frac{4}{10}$ inch.

ÆGOCERA BIMACULA (Plate 94, Fig. 2).

Ægocera bimacula, Walker, Catal. Lep. Het. B. M. i. p. 57 (1854); Boisd. Rev. et Mag. Zool. 1874, p. 54; Butler, Illust. Types Het. B. M. i. p. 11, pl. 5, fig. 4 (1877).

Forewing dark purple-brown, very sparsely speckled with yellow scales; a pale yellow longitudinally expanding streak from the base, an oblique band extending across the cell to near submedian vein, and a similar oblique band beyond the cell; the basal streak sometimes broken, and the bands somewhat constricted in the middle; in the female these markings are broadest: hindwing chrome-yellow, with a dark purple-brown, broad, waved, submarginal band, a large spot at upper end of the cell, and a spot beneath it beyond the lower end. Thorax and head dark purple-brown, with a yellow streak down the tegulæ, centre of thorax, and side of frontal tuft; palpi yellow, with a lateral blackish band on second joint and on tip of third; legs yellow, fore and middle legs and tarsi of hind legs with black bands; abdomen yellow, with some dorsal and lateral black spots.

Expanse, ♂ $1\frac{5}{8}$, ♀ $1\frac{7}{8}$ inch.

Genus EPISTEME.

Episteme, Hübner, Verz. bek. Schmett. p. 179 (1818-22).

Eusemia, Dalman, Prodr. Monog. Castniæ, p. 26 (1825); Duncan, Nat. Libr. Exotic Moths, p. 86; Walker, Catal. Lep. Het. B. M. i. p. 46; Boisd. Rev. et Mag. Zool. 1874, p. 81.

Forewing long, triangular; exterior margin slightly convex, posterior margin long; first subcostal emitted at nearly one-half before end of the cell, second from end of the cell, quadrifid; discocellular deeply concave, oblique; radial from upper end of the cell; three upper medians from angles at end of the cell, lower at one-fourth before the end; submedian almost straight: hindwing short, apex convex; costal vein extending to apex; two subcostal branches at some distance beyond end of the cell; discocellular concave, slightly bent in the middle, radial from the angle; two upper medians from angles at end of the cell, lower at one-fourth before the end; submedian and internal vein straight. Thorax and head pilose; abdomen squamose, long; palpi ascending, second joint reaching to near vertex, first and second joints laxly pilose in front, the hairs very long in male, third joint naked, cylindrical; legs long, femora slightly pilose beneath; antennæ long, slender, thickened towards the tip.

EPISTEME NIGRIPENNIS (Plate 94, Fig. 3, ♂).

Eusemia nigripennis, Butler, Annals of Nat. Hist. 1875, p. 140.

Bluish purple-black: forewing with a large sulphur-yellow quadrate spot obliquely across middle of the cell, and another beneath it, two smaller spots beyond upper end of the cell and two beyond the lower end; a subapical curved series of six small bluish-white dentate spots; some bluish-grey speckles at base of the wing: hindwing with two subapical and two lower small bluish-white spots; a small vermillion-red spot at anal angle. Thorax with four small sulphur-yellow spots in front; lower part of abdomen beneath vermillion-red; first and second joints of palpi with a lateral white spot.

Expanse $2\frac{1}{2}$ inches.

Family ZYGÆNIDÆ.

Wings long, narrow. Antennæ in typical genera simple, much thickened towards the tip; pectinated in some. Flight diurnal.

Larva short, fusiform, very sparsely clothed with short hairs arising from slight tubercles; in some the hairs are long and in fascicles. Pupa in a narrow densely-silken cocoon.

Subfamily SYNTOMINÆ.

Forewing without a discoidal veinlet in the cell; one submedian vein.

Genus SYNTOMIS.

Syntomis, Ochsenheimer, Schmett. Eur. ii. p. 103 (1807).
Amata, Fabricius, Syst. Gloss. (Illiger's Mag. vi. p. 289 (1807)).
Coenochromia, et *Eutomis*, Hübner, Verz. bek. Schmett. pp. 121, 122 (1818-25).

Forewing long, narrow, triangular; first and second subcostal branches from end of the cell, second four branched; discocellular bent abruptly outward near upper end, concave hindward, radial from the angle; two upper medians from lower end of the cell, second at one-seventh, and first, or lower, at one-third before the end; submedian much recurved: hindwing short; subcostal arched in the middle; discocellular obliquely concave; two upper medians from acute angle at lower end of the cell, the lower median at one-fourth before the end. Body long, smooth, thorax slightly pilose; palpi pilose, laterally flat and broad; legs long, smooth; antennæ smooth, thickened in the middle. (*S. Phegea.*)

SYNTOMIS GEORGINA (Plate 95, Fig. 2, ♂).

Syntomis Georgina, Butler, Journ. Linn. Soc. Zool. xii. p. 345 (1875).

Purple-brown: forewing with a small hyaline yellowish-white spot at the base below the cell, a large quadrate spot below end of the cell, a triangular spot at end of

the cell, a small contiguous spot above and another below the latter—the upper and sometimes the lower being obsolete; three subapical spots—the upper small, the lower geminated: hindwing with a large quadrate hyaline white basal spot below the cell, and a small spot below its end. Collar and two bands on abdomen ochreous-yellow; tip of antennæ, and first joint of tarsi whitish.

Expanse 1 to 1⅛ inch.

SYNTOMIS CYSSEOIDES (Plate 95, Fig. 1, ♀).

Syntomis Cysseoides, Butler, Journ. Linn. Soc. Zool. xii. p. 346 (1875).

Similar to *S. Georgina:* forewing with a hyaline white basal spot, two medial and three apical spots, the basal and upper apical largest, the lower apical smallest: hindwing with the outer spot widely separated from the basal. In the female these spots are also larger, this sex also showing a very small spot below the cell.

Expanse 1 to 1⅜ inch.

SYNTOMIS ARTINA (Plate 94, Fig. 4, ♂).

Syntomis Artina, Butler, Journ. Linn. Soc. Zool. xii. p. 347 (1875).

Purple-brown: forewing with a hyaline lengthened spot in middle of the cell, a small spot beneath it, an oblique spot above submedian, a conjoined spot on middle of the disc, and two above near the costa: hindwing with a small hyaline spot at end of the cell, one beyond it, and a large one below the cell; all conjoined. Front of head, collar, and two bands on the abdomen yellow.

Expanse, ♂ 1; ♀ 1⅜ inch.

SYNTOMIS PASSALIS.

Zygæna Passalis, Fabricius, Spec. Ins. ii. p. 159 (1781).

Syntomis Creusa, Cramer, Pap. Exot. iii. pl. 248, fig. F; Boisduval, Monogr. Zyg. p. 121, pl. 7, fig. 7; Walker, Catal. Lep. Het. B. M. i. p. 123 (*nec* Linn.).*

Syntomis Latreillei, Boisduval, *l. c.* p. 117, pl. 7, fig. 5, ♀ (1829).

Male and female glossy greenish purple-black: forewing with a small hyaline white spot near the base below the cell, a larger oblique spot beyond, one at end of the cell, two on middle of the disc, the upper one being minute in the male, and a single spot near the costa above; at base of the wing is a slight golden-yellow streak: hindwing with a single hyaline spot between middle and lower medians, this spot being very small in the male. Body metallic-blue; two golden-yellow streaks on middle of thorax, and a similar band on each segment of abdomen.

Expanse, ♂ 1⅜, ♀ 1⅘ inch.

"Colombo. In gardens. Generally found hanging to the leaves of the Bamboo." (*Hutchison.*)

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* Linnæus' *Sphinx Creusa* (Clerck, Icones, pl. 46, fig. 5) is a species of Euchromia=*E. irus*, Cram. pl. 368, fig. *a*.

SYNTOMIS MONTANA (Plate 94, Fig. 5, ♀).

Syntomis montana, Butler, Journ. Linn. Soc. Zool. xii. p. 349 (1875).

Differs from *S. Passalis* in being larger: forewing with similarly disposed but larger-sized hyaline spots in both sexes: hindwing with a much larger discal spot, and also with an inwardly oblique constricted spot below the cell. Bands on thorax and abdomen wider and more brilliant in colour.

Expanse, ♂ $1\frac{3}{8}$, ♀ $1\frac{6}{8}$ inch.

Genus ERESSA.

Eressa, Walker, Catal. Lep. Het. Brit. Mus. i. p. 149 (1854).
Trianeura, Butler, Journ. Linn. Soc. Zool. xii. p. 353 (1875).

Forewing lengthened, triangular, broad; cell extending two-thirds the wing; first subcostal emitted at one-eighth before end of the cell, five branched, the second ascending about one-third and fifth descending at one-half beyond the cell; radial from end of the cell; discocellular bent inward in the middle, emitting a slender discoidal veinlet within the cell from the angle; two upper median branches from contiguous angles at end of the cell, second at one-fifth, and first (or lower) at one-half before end of the cell; submedian recurved: hindwing short, narrow; costal margin slightly folded over (apparently from the costal vein) on upperside for half its length; cell broad, extending to half the wing; subcostal one branched; discocellular bent in the middle, emitting a slender discoidal veinlet within the cell; three median veins, the middle median emitted at one-sixth and lower at one-third before end of the cell. Body long, slender, clothed with short hairs; abdomen laterally tufted; palpi short, stout, laxly squamose, porrect; legs thick, roughly squamose, hind tibiæ tumid; antennæ strongly bipectinated. (*E. confinis.*)

ERESSA CONFINIS (Plate 95, Fig. 6, ♂).

Glaucopis (*Eressa*) *confinis*, Walker, Catal. Lep. Het. Brit. Mus. i. p. 149 (1854).

Brown: forewing with a broad transparent white medial irregular-shaped broad band, composed of an oval spot between the veins: hindwing with a similar transparent medial band. Thorax with two yellow spots; abdomen with a dorsal and lateral row of yellow spots, anal tuft in female whitish.

Expanse 1 to $1\frac{1}{8}$ inch.

ERESSA SUBAURATA (Plate 95, Fig. 4, ♂).

Glaucopis subaurata, Walker, Catal. Lep. Het. B. M. i. p. 149 (1854).
Trianeura subaurata, Butler, Journ. Linn. Soc. Zool. xii. p. 354 (1875).

Brown: forewing with a transparent white lengthened spot within the cell, two beneath it, and four on the disc beyond: hindwing with a similar transparent spot

within the cell, a large one beneath it, and two smaller spots beyond. Two yellow spots on the thorax; abdomen with a dorsal and lateral row of very small tufted yellow spots; legs pale brown.

Expanse $\frac{10}{12}$ inch.

Very similar to *E. confinis*, but a much smaller insect.

Subfamily ZYGÆNINÆ.

Forewing with a discoidal veinlet in the cell; two submedian veins.

Genus PROCOTES.

Procotes, Butler, Journ. Linn. Soc. Zool. xii. p. 355 (1875).

Forewing long, narrow, exterior margin oblique; cell long, narrow, extending two-thirds the wing; first subcostal branch bifid, emitted at one-sixth before end of the cell, third, fourth, and fifth from end of the cell; discocellular obliquely concave, emitting a slender discoidal veinlet within the cell, radial from upper end; two upper median branches on a foot-stalk half length beyond the cell, second from angle close to end of the cell, lower at one-sixth before the end; two submedians, lower slender: hindwing long, narrow, apex pointed, exterior margin very oblique; costal vein extending to near apex; subcostal slender, curved upward to costal from end of the cell and terminating at the apex, second branch bent downward and outward; discocellular bent inward, emitting a short slender discoidal veinlet within the cell from the angle and the radial from above the angle; cell large, broad; three upper medians on a foot-stalk descending at equal distances apart beyond the cell, lower branch at a short distance before end of the cell; submedian and internal vein nearly straight. Body short, stout; palpi short, thick, squamose; antennæ slightly bipectinated; legs short, thick, smooth, middle and hind tibiæ furrowed, apical spurs on hind tibiæ short, no middle spurs.

PROCOTES DIMINUTA (Plate 95, Fig. 3).

Euchromia (*Endera*) *diminuta*, Walker, Catal. Lep. Het. Brit. Mus. pt. i. p. 230 (1854).
Procotes diminuta, Butler, Journ. Linn. Soc. Zool. xii. p. 355 (1875).

Metallic bluish-green: forewing with a transparent whitish streak from base below the cell, one at end of the cell, a spot beyond the cell and another below its end: hindwing with a transparent whitish streak extending from base below the cell to the subcostal vein.

Expanse $1\frac{1}{10}$ inch.

Genus CALLIZYGÆNA.

Callizygæna, Felder, Reise Novara, Lep. iv. pl. 83, f. 4 (1868-74).

Forewing long, narrow, exterior margin oblique: hindwing somewhat pointed at the apex. Body long, extending half length beyond the wings; antennæ bipectinated.

CALLIZYGÆNA NIVIMACULA (Plate 95, Fig. 5).

Callizygæna nivimacula, Felder, Reise Novara, Lep. iv. pl. 83, f. 4 (1868-74).

Wings purplish grey-brown: forewing with a slender white streak from the base below the cell, and a white spot at end of the cell: hindwing whitish at the base. Body darker purplish-brown; collar and two bands on abdomen crimson.

Expanse $1\frac{1}{10}$ inch.

Described from Dr. Felder's figure.

Genus PHACUSA.

Phacusa, Walker, Catal. Lep. Het. Brit. Mus. i. p. 150 (1854); Butler, Journ. Linn. Soc. Zool. xii. p. 359 (1875).

Forewing long, narrow, triangular; exterior margin very oblique; cell long, extending two-thirds the wing; first subcostal emitted at one-eighth before end of the cell, second and third from the end, third bifid at half its length, fifth from slight angle immediately below base of the third; discocellular slightly bent near lower end, radial from near the angle; a discoidal veinlet emitted within the cell; two upper medians from angles above end of the cell, second at the end, first, or lower, at one-eighth before the end; two submedians at equal distances apart: hindwing short, narrow; cell broad, extending half the wing; subcostal one branched; discocellular bent outward and inward, radial from upper angle, and a discoidal veinlet emitted within the cell from lower angle; two upper medians from angles above end of the cell, second from the end, first, or lower, at one-sixth before the end; two submedians and an internal vein at equal distances apart. Body slender, extending half beyond the wings, tufted at anus; palpi minute; legs rather slender; antennæ thickly bipectinated, the pectinations plumose. (*P. tenebrosa.*)

PHACUSA THORACICA (Plate 95, Fig. 7).

Phacusa thoracica, Moore, Annals of Nat. Hist. 1877, p. 343.

Wings transparent: forewing with narrow purple-black costal and hind border, a broad band at the apex, a triangular patch on exterior margin, and a broad spot at end of the cell: hindwing with narrow purple-black anterior and outer borders. Head and thorax above purple-black; hind part of thorax above and entirely beneath brilliant red; abdomen steel-blue above, green below. Antennæ with white tip. Femora brown; tibiæ and tarsi varied blue and green.

Expanse $1\frac{1}{10}$ inch.

Genus EUCHROMIA.

Euchromia, Hübner, Verz. bek. Schmett. p. 121 (1818-25); Butler, Journ. Linn. Soc. Zool. 1875, p. 363.

Euchromia (*Phalanna*), Walker, Catal. Lep. Het. Brit. Mus. i. p. 218 (1854).

Forewing long, narrow, exterior margin very oblique; first and second subcostals emitted from end of the cell, second quadrifid; cell narrow, extending more than half length of the wing; discocellular concave, bent close to subcostal, emitting a very slender discoidal veinlet within the cell, radial recurved downward from the angle; three medians from angles at lower end of the cell, lower median at one-sixth before the end, much curved downward; two submedians, upper very slender, lower extending close to posterior margin: hindwing narrow, apex pointed; costal absent; subcostal running close along the margin; cell broad, extending more than half the wing; two subcostals from acute end of the cell; discocellular very concave, radial from the middle, very slender or obsolete; two median branches from acute lower angle of the cell; submedian slightly curved, internal straight. Body long, extending much beyond hindwings; palpi porrect, small, first joint pilose beneath, second and third squamose; antennæ long, bipectinated; legs long, smooth. (*E. sperchius.*)

EUCHROMIA POLYMENA (Plate 94, Fig. 6, 6*a*, larva).

Sphinx Polymena, Linnæus, Syst. Nat. ii. p. 806 (1767); Drury, Exot. Ins. i. pl. 26, fig. 1; Cramer, Pap. Exot. i. pl. 13, f. D.

Euchromia Polymena, Butler, Journ. Linn. Soc. Zool. xii. p. 364 (1875).

Euchromia (*Phalanna*) *Polymena*, Walker, Catal. Lep. Het. Brit. Mus. i. p. 219.

Phalanna Polymena, Moore, Catal. Lep. Mus. E. I. C. ii. p. 327, pl. 14, fig. 8 *a*, *b*.

Wings purplish-brown: forewing with three broad ochreous-yellow transverse bands, each divided by black veins; an indistinct blue spot at base of the costa and a similar spot at end of the cell: hindwing with two similar bands. Body and legs purplish-black; collar, and band on first, fourth, and fifth segments of abdomen scarlet, the third, fourth, and sixth segments with a lateral blue streak; front of head white.

Expanse 1¾ to 2 inches.

Larva reddish, anterior and posterior segments smallest; the segments with two dorsal and two lateral rows of darker red tubercular spots; from the lateral spots radiate a few short black hairs, and from the dorsal dense tufts, those on the fourth to twelfth segments long. Pupa dark purple-red; in a lax hairy and silken cocoon.

"Feeds on *Convolvulaceæ*." (*Thwaites.*)

"Colombo. Plains; on cultivated ground, during N.E. Monsoon. Flies by day; easily captured." (*Hutchison.*)

Family CHALCOSIIDÆ.

Wings long, rather broad : forewing with a discoidal veinlet emitted within the cell; two submedian veins. Antennæ thickly bipectinated to tip in male, less pectinated and more or less flabellate at tip in female. Flight diurnal.

Larva short, thick; tubercular; with two or three short fine hairs arising from each. Pupa in a densely-silken cocoon.

Genus TRYPANOPHORA.

Trypanophora, Kollar, in Hügel's Kaschmir, iv. 2, p. 457 (1844).

Wings partly diaphanous : forewing elongated, narrow, apex acute, exterior margin oblique; costal vein thick at the base; first subcostal emitted at one-fourth and second at about one-tenth before end of the cell, third trifid, the radial being thrown off from below third close to the base; discocellular inwardly oblique; emitting a slender pseudo-vein within the cell; cell long, extending three-fourths the wing; four median branches at nearly equal distances apart, the lowest being emitted at nearly one-third before end of the cell; two submedian veins much recurved : hindwing narrow; apex convex, exterior margin very oblique, slightly concave in middle; costal and subcostal confluent from near base, and joined to apex of wing; no subcostal branch; discocellular bent outward in the middle, emitting a slender pseudo-vein within the cell; radial from the angle; cell extending four-fifths the wing; four median branches at nearly equal distances, lower being emitted at two-fifths before end of the cell; two very slender submedians and an internal vein. Thorax rather stout, abdomen extending half length beyond hindwings, ovipositor exserted in female; antennæ long, bipectinated in male, minutely bipectinated and thickened at the tip in female; head flat in front, palpi very small; proboscis long; legs smooth. (*T. semihyalina.*)

TRYPANOPHORA TAPROBANES (Plate 95, Fig. 8 ♀, 8*a*, larva).

Trypanophora taprobanes, Walker, Catal. Lep. Het. Brit. Mus. ii. p. 435 (1854).

Forewing bluish purple-brown, with a broad subapical transparent macular patch : hindwing blue, the anterior border purple-brown. Head and legs purple-brown; antennæ purple-blue.

Expanse ♀ 1½ inch.

Larva dark purple-brown, short, thick; third to sixth segments with two dorsal and two lateral rows of short sparsely-haired tubercles, the lower lateral tubercle on second segment longer and clavate; a lateral yellow blotch on tenth and eleventh segments. Pupa pale reddish-ochreous; in a yellowish dense silky cocoon.

"Feeds on *Lagerstrœmia*." (*Thwaites.*)

Genus SEPHISA.

Eterusia, Hope, Trans. Linn. Soc. 1840, p. 445; Westw. Arcana Ent. p. 19; Walker, Catal. Lep. Het. B. M. ii. p. 427.

Heterusia,* Boisd.; Doubleday; Butler.

Forewing long, narrow; costa much arched, exterior margin very oblique; cell extending three-fourths the wing; first subcostal emitted at two-eighths and second at one-eighth before end of the cell, third quadrifid, the fourth being thrown off at one-third before its end, the fifth at two-fifths before its end, and the sixth (or radial) at one-fifth from its base beyond end of the cell; discocellular bent acutely inward in its middle, emitting a discoidal veinlet within the cell; two upper medians on a footstalk one-fourth beyond end of the cell, second at one-tenth, and first (or lower) at one-fourth; two submedians, upper much arched: hindwing somewhat long, abdominal margin short; costal vein extending to apex; subcostal very slender, joined to costal by a short minute spur at one-fifth before end of the cell, two branches emitted from contiguous angles at end of the cell; discocellular short, bent inward, emitting a discoidal veinlet within the cell; two upper medians from angles at end of the cell, second at nearly one-fourth and first (or lower) at two-fifths before the end; two straight submedians and a much curved internal vein. Body narrow, male slightly tufted and female with exserted ovipositor; head conical in front; palpi very minute; legs long, slender, smooth; antennæ very long, bipectinated, the pectinations of equal length to the tip in male, in female short to near the tip, where they widen.

SEPHISA CINGALA (Plate 96, Fig. 1, ♂).

Eterusia cingala, Moore, Annals of Nat. Hist. 1877, p. 343.

Male and female: forewing dark sap green, with a broad basal whitish blue-bordered band, crossed by a blackish-green streak; a discal zigzag series of yellowish spots, and a larger spot at end of the cell: hindwing with the base and a broad outer band black, the veins and marginal border steel-blue; a series of yellowish spots before the apex, which are indistinct in the male; middle band pale yellow. Thorax and base of abdomen in male steel-blue, lower part of abdomen yellow, tip black; antennæ black, shaft steel-blue. Underside as above, veins blue lined.

Expanse, ♂ 2, ♀ 2½ inches.

Larva short, thick, anterior segments broadest, head small; ochreous-brown, the segments with six or seven rows of black tipped tubercles, from which spring two or three short black hairs. Pupa pale ochreous-yellow beneath, pinkish and spotted above, in a narrow dense pale ochreous cocoon.

"Feeds on Lagerstræmia, &c." (*Thwaites.*)

"In jungle. Low country." (*Hutchison.*)

* Previously used by Hübner, Zutr. Exot. Schmett. pt. 3. p. 18 (1825).

Genus SCAPTESYLE.

Scaptesyle, Walker, Catal. Lep. Het. B. M. ii. p. 378 (1854).

Forewing narrow, costa arched, exterior margin short, slightly oblique, posterior margin long, straight; first subcostal emitted at about one-third and second at one-sixth before end of the cell, third trifid; cell extending two-thirds the wing; discocellular bent outward near upper end, slightly concave below, radial from the angle, a slender discoidal veinlet emitted within the cell; two upper medians on a foot-stalk one-third beyond end of the cell, second at a short distance, and first (or lower) at about one-third before the end; an apparently slender upper submedian and a lower submedian: hindwing triangularly oval; costal and subcostal veins united to half length of the cell, two subcostal branches on a foot-stalk half beyond the cell; cell extending two-thirds the wing; discocellular bent outward below the middle, the radial from the angle; a slender discoidal veinlet emitted within the cell; two upper medians on a foot-stalk half beyond the cell, the next (or lower) at one-fifth before the end; two submedians and an internal vein, the upper submedian very slender. Body extending beyond hindwings in male, smooth, tufted in female; palpi smooth, porrect, slender; legs long; antennæ slender, minutely bipectinated in male. (*S. tricolor.*)

SCAPTESYLE BICOLOR (Plate 96, Fig. 2, ♂).

Scaptesyle bicolor, Walker, Catal. Lep. Het. B. M. Suppl. p. 182 (1864).
Dichromia Nietneri, Felder, Reise Novara, Lep. iv. pl. 106, f. 25 (1868-74).

Indian-yellow: forewing with a broad apical transverse purple-brown band and a slight basal band: hindwing with a similar broad apical band. Body purple-brown; collar yellow; anal tuft greyish-ochreous; palpi white tipped; legs with white bands; antennæ purplish-brown.

Expanse, ♂ $1\frac{1}{8}$, ♀ $1\frac{2}{8}$ inch.

"Puselawe. Hills, 3000 feet, on cultivated ground; during S.W. Monsoon." (*Hutchison.*)

Genus HETEROPAN.

Heteropan, Walker, Catal. Lep. Het. B. M. ii. p. 440 (1854).

Wings very small; cilia prominent: forewing almost rectangular; exterior margin short, erect, posterior margin as long as costal; subcostal vein widely separated from the costal; cell extending more than two-thirds the wing; first, second, and third subcostal branches at equal distances apart, first emitted at one-third before end of the cell, third trifid; radial from below base of third; discocellular bent inward in the middle, emitting a very slender discoidal veinlet within the cell; three upper medians from angles at end of the cell, lower at one-eighth before the end;

two submedians, the upper very slender: hindwing triangularly oval; costal vein extending to near apex; subcostal two-branched, first emitted at one-sixth before end of the cell; discocellular bent acutely inward in the middle, emitting a slender discoidal veinlet within the cell from the angle, radial from upper end contiguous to subcostal; two upper medians from angles at end of the cell, the two lower at equal distances apart, the lower at one-sixth before end of the cell; two submedians and an internal vein. Body small, short, slender; head very small; palpi porrect, very slender, proboscis long; legs slender; antennæ bipectinated, the shaft thickened towards tip, pectinations short and broad.

HETEROPAN SCINTILLANS (Plate 96, Fig. 3).

Heteropan scintillans, Walker, Catal. Lep. Het. Brit. Mus. ii. p. 441 (1854).

Forewing pale dull silvery-grey; the exterior margin and cilia metallic cupreous-black: hindwing paler bluish-grey, exterior border and cilia cupreous-grey. Thorax, head, and legs silvery-grey, abdomen and antennæ blue.

Expanse $\frac{3}{4}$ inch.

Genus CYCLOSIA.

Cyclosia, Hübner, Verz. bek. Schmett. p. 177 (1818-25).

Forewing elongated, triangular, costa very convex, apex pointed; upper end of the cell extending two-thirds the wing and lower end to three-fourths; first subcostal branch very short, joined to the costal, emitted at one-fourth before end of the cell, second at one-twelfth, third quadrifid, the fourth emitted at one-fifth, the fifth from near end of fourth and extending to below the apex, the sixth (or radial) being thrown off from below the third at about one-fifth beyond the cell; discocellular very oblique, bent inward near upper end, emitting two short discoidal veinlets within the cell, the upper from angle of discocellular, the lower at halfway below it, both joined together at one-third beyond and extending singly to base of the cell; two upper medians from contiguous angles at end of the cell, second at one-sixth, first (or lower) at one-third before end of the cell; two submedians, upper curved: hindwing short, triangularly oval; cell extending beyond two-thirds the wing, very oblique from first subcostal branch; costal vein extending to apex; subcostal slender, first branch very short, emitted at one-fifth before end of the cell and joined to costal; disco-cellular very oblique, radial from its middle, a discoidal veinlet emitted within the cell; two upper medians from wide angles at end of the cell, second at one-fifth, and first (or lower) at two-fifths before end of the cell; two submedians and an internal vein. Body short; palpi short, porrect, slender; legs smooth; antennæ bipectinated.

CYCLOSIA PANTHONA (Plate 97, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Phal. Geom. Panthona, Cramer, Pap. Exot. iv. p. 68, pl. 322, f. C (1782).
Cyclosia Panthona, Hübner, Verz. bek. Schmett. p. 177 ; Walker, Catal. Lep. Het. B. M. ii. p. 417.

Greenish-black. Both wings with an exterior marginal white macular band. Body steel-blue ; antennæ black, shaft steel-blue.

Expanse $1\frac{3}{4}$ to $3\frac{1}{4}$ inches.

Larva short, thick, ochreous-yellow; third to twelfth segments with eight or nine rows of tubercular black spots, each spot tipped with white and two or three fine short black hairs ; second segment and head brown ; legs black ; a row of minute black dots between the lateral rows of tubercles. Pupa ochreous-yellow ; in a dense oval reddish cocoon.

" Larva feeds on A. Lindleyana." (*Thwaites.*)

Genus CHALCOSIA.

Chalcosia, Hübner, Verz. bek. Schmett. p. 173 (1818-25) ; Walker, Catal. Lep. Het. B. M. ii. p. 420.
Milleria (part), Boisduval ; Herr. Schæffer.

Forewing elongated, cell extending four-fifths the wing, broadest before the end; first subcostal emitted at one-fourth, second at one-ninth before end of the cell, third bifid at one-half beyond the cell, fifth from base of third at end of the cell ; discocellular bent outward near upper end and acutely inward below the middle, the radial from upper angle, and a slender discoidal veinlet emitted within the cell from lower angle ; two upper medians from angle at end of the cell, second at one-ninth and first (or lower) at two-ninths before the end ; two submedians, upper much arched : hindwing rather broad, exterior margin very convex ; cell extending beyond two-thirds the wing, fusiform ; costal vein very slender, extending to apex ; first subcostal branch very short, emitted at nearly one-third before end of the cell and joined to costal ; discocellular bent as in forewing, radial from upper angle, a discoidal veinlet emitted within the cell from lower angle ; two upper medians from angles at end of the cell, second at one-fifth and lower at one-third before end of the cell ; two submedians and an internal vein. Body short ; head small ; palpi small, porrect, short, not extending beyond eyes ; legs smooth ; antennæ bipectinated. (*C. pectinicornis.*)

CHALCOSIA PRETIOSA (Plate 96, Fig. 4, ♂).

Chalcosia pretiosa, Walker, Catal. Lep. Het. B. M. Suppl. p. 116 (1864).

Male : forewing golden-green, the outer veins interspaced with a blue-bordered black streak ; a narrow interrupted white band crossing the disc ; two minute white upper apical spots and one similar lower dot : hindwing pale purplish-blue. Thorax golden-green, abdomen blue ; collar and front of head carmine ; antennæ blue.

Expanse $1\frac{1}{2}$ inch.

CHALCOSIA QUADRIFASCIATA (Plate 96, Fig. 5, ♂).

Male: forewing greyish metallic-green, with broad black interspaces between the veins externally; a transverse medial angulated yellowish-white band, the lower base of the wing also yellowish-white: hindwing greyish-blue, with a broad yellowish-white angulated transverse band extending from costa obliquely below the apex; interspaces between the external veins black. Body metallic-green.

Expanse $1\frac{3}{4}$ inch.

CHALCOSIA VENOSA (Plate 97, Fig. 2, 2*a*, ♂ ♀).

Chalcosia venosa, Walker, Catal. Lep. Het. B. M. ii. p. 422 (1854).

Male. Yellowish-white: forewing with the apical area, the base of costal border and a broad irregular oblique antemedial band extending across middle of the cell and disc to submedian vein brilliant golden-green, with a blue-bordered black intervening streak between the veins: hindwing with a metallic blue-black marginal band with crenulated inner border. Female: forewing with the apical and medial irregular band somewhat narrower, thus leaving a broader transverse oblique discal space; apical band traversed by a narrow yellowish-white streak: hindwing with a black upper apical spot and a very indistinct smaller lower spot. Thorax and palpi steel-blue; abdomen cupreous-brown above, yellowish beneath; legs yellowish beneath, bluish above; collar and head above carmine, antennæ steel-blue.

Expanse, ♂ $1\frac{1}{2}$, ♀ $1\frac{3}{4}$ inch.

CHALCOSIA SIMILATA (Plate 97, Fig. 3, 3*a*, ♂ ♀).

Allied to *C. venosa*. Male differs on forewing in having a broader pale yellow transverse medial discal area, pale yellow spots traversing the apical band, and the antemedial band broken. On the hindwing the marginal border is somewhat broader. Female differs from same sex of *C. venosa* in having the antemedial band represented by a small spot within the cell and a geminated lower spot. On the hindwing the two apical spots are of the same size.

Expanse, ♂ ♀ $1\frac{3}{4}$ inch.

CHALCOSIA AFFINIS (Plate 98, Fig. 2, ♂).

Gynautocera affinis, Guér. Menéville, Delesserts, Voy. Ind. p. 86, pl. 24, f. 2 (1843).

Male and female: forewing golden-green, crossed by a pale yellow angular medial band, the posterior and anterior areas streaked with blue-black between the veins; two minute yellowish upper apical spots, and two similar lower apical spots: hindwing pale yellow, with a blue-black apical band. Thorax cupreous; abdomen blue or greenish-cupreous; collar and top of head carmine; antennæ blue; legs yellow beneath, blue above.

Expanse, ♂ $1\frac{3}{4}$, ♀ 2 inches.

Genus AMESIA.

Amesia, Westwood, Arcana Ent. p. 19 (1841); Duncan, Nat. Libr. Exot. Moths, p. 93 (1852).

Forewing elongated, apex convex; cell extending two-thirds the wing; first subcostal short, joined to subcostal, emitted at two-sevenths, and second at one-seventh before end of the cell, third quadrifid, fourth thrown off at more than one-third before its end and terminating at the apex, fifth at two-thirds, and sixth (or radial) at a short distance from base of third beyond end of the cell; discocellular bent acutely inward before the middle, recurved hindward, emitting two short discoidal veinlets within the cell; two upper median branches from angles at end of the cell, second at one-tenth, and first (or lower) at one-third before the end; two submedians, both somewhat bent towards each other below the lower median, and there joined together by a cross-vein: hindwing triangularly oval; costal vein extending to apex; subcostal slender, first branch of subcostal very short and joined to costal, emitted at one-fourth before end of the cell; discocellular slightly bent outward and inward before the middle, emitting a discoidal veinlet within the cell from the inner angle, and the radial from the outer angle; two upper medians from angles at end of the cell, upper very close to radial, second at one-ninth, and first (or lower) at one-third before end of the cell; two submedians, and a curved internal vein. Body slender, head small, projecting in front; antennæ long, bipectinated; palpi short, thick; legs long, slender. (*A. sanguiflua.*)

AMESIA MIDAMA (Plate 98, Fig. 1, 1a, ♂ ♀).

Epyrgis midama, Boisd.; Herr. Schæffer, Lep. Exot. pl. 2, f. 7 (1853) ♂.

Male purplish-black: forewing with one, or two, small yellowish-white spots within end of the cell, two beyond the end, a submarginal row of five and a marginal row of eight oval white spots; the apical and marginal areas between the spots washed with glossy-blue: hindwing with a marginal upper row of blue-bordered very minute white spots, and two or three yellowish-white subapical spots. Female differs in all the spots being more distinct, with two additional spots on the disc of forewing; a submarginal row and two spots within the cell on hindwing, the blue colour being confined to bordering the marginal spots.

Expanse, ♂ $2\frac{3}{4}$, ♀ 3 inches.

"Colombo and Kandy. Plains and up to 2000 feet in forest and waste land. Slow flier; easily caught; settles on bark of trees. Flies by day." (*Hutchison.*)

Family NYCTEMERIDÆ.

Wings somewhat short, broad; no discoidal veinlet; one submedian vein in forewing. Antennæ pectinated. Flight diurnal.

Larva elongated, cylindrical, clothed with slight tufts of fine hair, the anterior pair fasciculate. Pupa in a light silken cocoon.

Genus NYCTEMERA.

Nyctemera, Hübner, Verz. bek. Schmett. p. 178 (1818-25).
Orphanos (part), Hübner, *l. c.* 306 (1825-27); Herr. Schæffer, Aussereurop. Schmett. p. 14 (1858).
Leptosoma, Boisduval.

Forewing short, somewhat narrow; exterior margin slightly oblique; cell extending about two-thirds the wing; first subcostal emitted at one-sixth before end of the cell; second at one-twelfth, bifid; fourth trifid, ascending to third and anastomosed to it to within half its length, fifth from immediately below its juncture with the third, and the sixth (or radial) from near its base beyond end of the cell; discocellular bent inward; two upper medians from angles at end of the cell, second at one-eighth, and first (or lower) at three-eighths before end of the cell; submedian curving downward from the base: hindwing short, broad, exterior margin convex; cell extending two-thirds the wing; subcostal joined to costal to one-fourth from its base; two subcostal branches on a foot-stalk one-fourth beyond end of the cell; discocellular bent inward before the middle; two upper medians from angles at end of the cell, second at one-eighth and lower at three-eighths before end of the cell; submedian and an internal vein straight. Body short; palpi porrect, first joint laxly pilose, second and third squamose, slender, second joint extending half beyond the head, third joint nearly as long as second; legs long, slender, smooth; antennæ bipectinated. (*N. lacticinia.*)

NYCTEMERA LACTICINIA (Plate 99, Fig. 1, 1*a*, larva).

Phal. Geom. Lacticinia, Cramer, Pap. Exot. ii. pl. 128, fig. E (1779).
Nyctemera Lacticinia, Hübner, Verz. bek. Schmett. p. 178; Walker, Catal. Lep. Het. B. M. ii. p. 395; Moore, Catal. Lep. Mus. E. I. C. ii. p. 331, pl. 14, fig. 10, 10*a*.

Male and female: forewing dark smoky-brown, with an oblique discal yellowish-white macular band extending from costa to near the posterior angle, and a short basal streak on posterior margin: hindwing white, with a broad brown marginal band. Head and thorax ochreous-grey, black spotted; abdomen grey with narrow black dorsal segmental bands and lateral spots, tip ochreous; palpi ochreous, black tipped; antennæ black, shaft brown; legs brown above, white beneath.

Expanse, ♂ $1\frac{1}{2}$, ♀ $1\frac{3}{4}$ inch.

Larva dull red, with a dorsal and two lateral rows of radiating tufts of fine black hair arising from black tubercles. Pupa dull red.

"Colombo. Plains; in gardens. Day flier. Easily caught." (*Hutchison.*)

NYCTEMERA LATISTRIGA (Plate 99, Fig. 2, ♂).

Nyctemera latistriga, Walker, Catal. Lep. Het. B. M. ii. p. 397 (1854).
Leptosoma latistriga, Butler, Types Lep. Het. B. M. v. p. 44, pl. 88, fig. 1 (1881).

Male and female: forewing dark smoky-brown, with an oblique discal white macular band, and a broad longitudinal band beneath the cell; the veins and margin above and below the latter band white streaked: hindwing white, with a broad dark brown marginal band. Body ochreous-grey; head and tip of abdomen ochreous; head and thorax black spotted, abdomen with black dorsal bands and lateral spots; antennæ black; palpi black tipped; legs blackish above, yellowish beneath.

Expanse $1\frac{1}{2}$ inch.

NYCTEMERA NIGROVENOSA (Plate 98, Fig. 4, ♀, 4*a*, larva).

Nyctemera nigrovenosa, Moore, Proc. Zool. Soc. 1879, p. 394.

Allied to *N. coleta*, Cram. (Exot. Lep. pl. 368, f. H), from Java; differs on the forewing in the discal maculated band being somewhat narrower; and on the hindwing in the veins being lined with black throughout, both above and beneath.

Expanse $1\frac{3}{4}$ inch.

Larva purple, anterior segments yellowish; black spotted; hairy; crossed by short dorsal and lateral white streaks. Pupa yellow, black spotted.

"Feeds on Gynura, and other Compositæ." (*Thwaites.*)

"Puselawe. Hills, 3000 feet, on cultivated ground. Day flier." (*Hutchison.*)

Genus DONDERA.

Dondera Moore, Annals of Nat. Hist. 1877, p. 345.

Forewing elongate, narrow, costa arched, apex somewhat acute, exterior margin very oblique: hindwing long and narrow, extending beyond angle of forewing, apex very convex, abdominal margin short. Body moderate; antennæ long, slender, bipectinated; palpi slender, porrect, naked; legs long, slender, naked, middle and hind tibiæ spurred. Venation similar to *Nyctemera lacticinia.*

DONDERA ABLA (Plate 98, Fig. 3, ♂).

Dondera alba, Moore, Annals of Nat. Hist. 1877, p. 345.

Female. Upperside pure white throughout both wings. Head, thorax, and

palpi with black spots; abdomen and body beneath pale ochreous, with broad black dorsal segmental bands and lateral spots. Underside uniform greyish-brown, the cilia being white.

Expanse 2 inches.

Genus CUROBA.

Curoba, Walker, Catal. Lep. Het. B. M. Suppl. p. 272 (1864).
Eucharia (part), Hübner, Verz. bek. Schmett. p. 181 (1818-25).

Forewing elongated, exterior margin short, slightly convex, posterior margin long; cell extending two-thirds the wing; first and second subcostal branches emitted near end of the cell, second trifid, fifth from end of the cell, and looped to third for a short distance near its base, sixth (or radial) from end of the cell: discocellular oblique; two upper medians from angles at lower end of the cell, second at a short distance, and lower at two-fifths before end of the cell; submedian almost straight: hindwing triangularly oval, exterior margin very convex; cell broad, extending two-thirds the wing; costal vein extending to apex; subcostal joined to costal to one-fourth from the base; two subcostal branches from end of the cell; discocellular slightly bent in the middle; two upper medians from angles at end of the cell, second at one-eighth, and first (or lower) at about one-third before end of the cell; one submedian and an internal vein. Body short, slender; palpi porrect, second joint extending much beyond the head, laxly squamose beneath, third joint shorter than second, pointed; antennæ bipectinated; legs slender, smooth.

CUROBA SANGARIDA (Plate 99, Fig. 3, 3*a*, ♂).

Phal. Noct. Sangarida, Cramer, Pap. Exot. iv. fig. D (1781).
Eucharia Sangarida, Hübner, Verz. bek. Schmett. p. 181.
Phal. Noct. Mopsa, Drury, Exot. Ins. iii. pl. 3, f. 3 (1782).
Curoba fasciata, Walker, Catal. Lep. Het. B. M. Suppl. p. 272 (1864).

Forewing dark olivaceous-brown, with an oblique subapical yellowish-white band extending from costa to posterior angle: hindwing carmine, the basal area brown; a black waved discal band and vein-streaks extending to outer margin. Cilia brown. Body brown above, yellowish-carmine beneath; basal joint of palpi with carmine spots; antennæ and legs brown.

Expanse 1⅝ inch.

"Puselawe. Hills, on cultivated ground. February. Very rare." (*Hutchison.*)

Family CALLIDULIDÆ.

Wings short, broad; cell open in hindwing, and in some genera the exterior margin is more or less angulated in the middle. Flight diurnal.

Larva unknown.

Genus CLEOSIRIS.

Tetragonus,* Hübner-Geyer, Zutr. Exot. Schmett. pt. iv. p. 17, f. 653 (1832).
Cleosiris, Boisduval, Spec. Gén. Lep. i. pl. 23, f. 3 (1836).

Wings short, very broad, quadrangular in outline: forewing acutely angular at the apex; costal vein extending two-thirds the wing; first subcostal emitted at two-thirds before end of the cell, second and third emitted close together near end of the cell, third bifid, the fourth being thrown off from below at one-sixth from its base, fifth from end of the cell: discocellular slender, bent outward at one-third from its upper end, radial from the angle; cell broad, extending nearly one-half the wing; two upper median branches from angles above end of the cell, second from angle close to the end, first (or lower) at one-half before the end; submedian slightly recurved: hindwing produced to angle in middle of exterior margin; costal vein curved downward from the base and then arched to the apex; two subcostal branches emitted at one-tenth from the base, the first touching the costal; cell open; lower or first median branch emitted at twice the length from beyond opposite the subcostal branches, second and third at thrice the length, the radial (or upper median) starting from midway between the lower and second branches; submedian and internal vein straight. Body slender, short; palpi porrect, first and second joint thick, laxly squamose, second joint extending half length beyond the head, third joint long, of the same length as the second, cylindrical, slender, naked; antennæ slender, setose; legs short, rather thick, tibiæ thickened.

CLEOSIRIS CATAMITA (PLATE 99, FIG. 4, 4*a*).

Tetragonus Catamitus, Hübner-Geyer, Zutrage Exot. Schmett. pt. iv. p. 17, fig. 653-4 (1832).
Cleosiris Catamita, Boisduval, Spec. Gén. Lep. i. pl. 23, fig. 3; Doubleday and Westw. Gen. D. Lep. pl. 77, f. 9.

Brownish-ferruginous: forewing with an indistinct yellowish-ferruginous waved subapical fascia: hindwing uniformly coloured. Underside ferruginous-yellow, numerously covered with slender red confluent strigæ, which, across the wings, form a slight fascia from apex of forewing to middle of abdominal margin of hindwing, and a less defined similar outer fascia; three small ferruginous-brown ocellated spots within each cell, the spots white centred.

Expanse, ♂ ♀ 1⅜ to 1⅘ inch.

Family LITHOSIIDÆ.

Wings generally very long and narrow. Antennæ more or less finely pectinated. Larva elongated, head large; hairy; pupa in a slight, hairy, silken web.

* *Tetragona* and *Tetragonum* previously used.

Subfamily HYPSINÆ.

All the genera in this subfamily possess a peculiar stridulatory apparatus in both sexes. This is distinctly visible on the upperside of the posterior margin of the forewing, and as viewed from the *underside* of the wing appears as a short oval nacreous cavity, situated between the submedian vein and the extreme margin, along the upper edge of which projects a raised longitudinally oblique fold, which is smooth in some, and transversely scabrous in others; and on the *upperside* of the hindwing is a patch of scabrous scales, or a short transverse outwardly curved raised scabrous bar, which, by the motion of this wing, probably plays upon the raised fold over the edge of the cavity, and produces a stridulating sound.

Genus HYPSA.

Hypsa, Hübner, Verz. bek. Schmett. p. 172 (1818-25); Walker, Catal. Lep. Het. B. M. ii. p. 449.

Forewing elongated; costa arched towards the end, apex acute, exterior margin very oblique, posterior margin somewhat convex; cell extending beyond half the wing; first subcostal emitted at nearly one-half before end of the cell, second at one-fifth, bifid at one-fourth from its base, fourth from end of the cell, bifid, and anastomosed to third near its base, the fifth being thrown off from below before the juncture; discocellular slightly bent close to upper end, radial from the angle; three upper medians from angles at end of the cell, lower at one-third before the end; submedian much recurved: hindwing short; exterior margin convex; costal vein extending to apex; subcostal bent upward at one-third from its base and joined to costal by a short spur; cell extending nearly one-half the wing; two subcostal branches from end of the cell; discocellular slightly oblique and concave; three upper medians from angles at end of the cell, lower at one-third before the end. Body moderately stout and short; palpi ascending, long, slender, second joint reaching to vertex, third joint nearly as long as second, cylindrical, slightly clavate at tip; antennæ very finely bipectinated; legs squamose. (*H. silvandra.*)

HYPSA PERSECTA (Plate 100, Fig. 1, ♀, 1*a*, larva).

Hypsa persecta, Butler, Trans. Ent. Soc. 1875, p. 317.

Forewing greyish-brown, with a broad creamy-white longitudinal medial area, and a large spot above end of the cell; base of wing pale ochreous with black dentate spots: hindwing creamy-white, with a narrow greyish-brown marginal band; a black spot at end of the cell, and a discal series of three spots. Thorax and head pale ochreous, thorax black spotted; abdomen brighter ochreous-yellow, with slight and indistinct blackish dorsal rings, and lateral spots; palpi with black bands; legs black streaked above.

Expanse 2 to $2\frac{3}{4}$ inches.

Larva cylindrical; head large; very sparsely hairy; dark purple-brown; second and third segments pale red; a transverse narrow yellow band on fourth to last segment. Pupa dusky red.

Genus DAMALIS.

Damalis, Hübner, Verz. bek. Schmett. p. 172 (1818-25); Walker, Catal. Lep. Het. B. M. ii. p. 453.

Wings broader than in *Hypsa*. Body stouter; palpi more slender, and longer; antennæ less pectinated.

DAMALIS ALCIPHRON (PLATE 102, FIG. 1, 1 *a*, *b*).

Phal. Att. Alciphron, Cramer, Pap. Exot. ii. pl. 133, f. E (1777).
Hypsa Alciphron, Moore, Catal. Lep. Mus. E. I. C. ii. p. 292, pl. 13, fig. 6, 6*a*.
Noctua Caricæ, Fabricius, Ent. Syst. iii. p. 27 (1793); Donovan, Ins. N. Holl. pl. 39, f. 2.
Hypocrita v. Caricæ, Hübner, Samml. Exot. Schmett. i. pl. 191, fig. 1-4 (1806).
Damalis Caricæ, Hübner, Verz. bek. Schmett. p. 172.
Hypsa (*Damalis*) *Caricæ*, Walker, Catal. Lep. Het. B. M. ii. p. 454.

Forewing ochreous greyish-brown; veins ochreous-white; base of wing ochreous-yellow, and marked by five small black spots, two being on the costa and three below them; an ochreous-white spot at lower end of the cell: hindwing ochreous-yellow, with a black spot at end of the cell, two discal spots beyond, and a more or less perfect outer discal series decreasing to anal angle. Body ochreous-yellow; a black spot on tegulæ, and a slight spot at juncture with base of the wing; a more or less dorsal and lateral row of spots on abdomen; tip of first and second joints and entire third joint of palpi black; legs with black bands.

Expanse 2 to $2\frac{1}{4}$ inches.

Larva cylindrical; each segment with a few very slender scattered hairs. Black above, brownish beneath; two longitudinal white dorsal bands, a small ocellus on each segment, and lateral black spots; head red; front legs black, middle and hind legs reddish-brown. Pupa dark reddish-brown.

"Feeds on *Ficus oppositifolia*." (*Thwaites.*)

DAMALIS PRODUCTA (PLATE 101, FIG. 1, 1*a*, ♂ ♀, larva).

Hypsa producta, Butler, Trans. Ent. Soc. 1875, p. 320.

Larger and with longer forewings, and antennæ more distinctly bipectinated than *D. Alciphron*: forewing greyish-ochreous; veins creamy-white; basal yellow area larger and with six black spots, three on the costa and three below; discoidal spot larger but less prominent: hindwing with the spots larger, the outer series complete and regular; spots on abdomen also regular.

Expanse $1\frac{3}{8}$ to $2\frac{6}{8}$ inches.

Larva cylindrical; head large; dorsally tuberculated from fifth to last segment; sparsely hairy; purplish-brown, paler on anterior segments above; some pale lateral spots; a dorsal blackish line and oblique cross bars on penultimate segments. Pupa dusky red.

Genus LACIDES.

Lacides, Walker, Catal. Lep. Het. B. M. ii. p. 456 (1854).

Wings shorter and broader than in typical Hypsa: forewing less produced at the apex, exterior margin more convex: hindwing more convex. Cells longer; the venation similar. Antennæ of male more strongly bipectinated. (*L. Ficus.*)

LACIDES FICUS (Plate 100, Fig. 2).

Noctua Ficus, Fabricius, Ent. Syst. iii. p. 27 (1793).
Hypsa (*Lacides*) *Ficus*, Walker, Catal. Lep. Het. B. M. ii. p. 456.
Hypsa Ficus, Moore, Catal. Lep. Het. B. M. ii. p. 293, pl. 13, fig. 8, 8*a*.

Forewing ochreous greyish-brown; veins creamy-white; with a less distinct intervening streak between the veins; base of costa, the cell, and basal area ochreous-red, ornamented with creamy-white spots and black streaks and spots: hindwing ochreous-yellow, with a prominent black spot at end of the cell, and a recurved discal series of almost confluent spots. Thorax ochreous-red, with a creamy-white collar and streak across the tegula, and below the latter a black spot; abdomen ochreous-yellow, with slight black dorsal and lateral spots; legs and palpi with black bands.

Expanse 2 to 2¼ inches.

Genus MIGOPLASTES.

Migoplastes, Felder, Verh. Zool. Bot. Gesell. Wien, 1868, p. 285.
Pachyphilona, Butler, Trans. Ent. Soc. Lond. 1875, p. 325.

Forewing elongated, almost oval; costa much arched towards the end, exterior margin slightly oblique; cell long, extending two-thirds the wing; first subcostal branch emitted at one-sixth, and second at one-twelfth before end of the cell, second bifid, fourth bifid, emitted from end of the cell and touching third near its base, fifth from below its juncture with the third; discocellular concave, radial from slight angle at its upper end; three upper medians from angles at end of the cell, lower at nearly one-half before the end; submedian extending near margin, slightly recurved: hindwing short, broad, apex and exterior margin convex; cell extending nearly two-thirds the wing; two subcostal branches emitted at a short distance beyond the cell; discocellular bent in the middle; three upper medians from angles at end of the cell, lower at nearly one-half before the end. Body moderately stout; palpi porrect, first and second joints laxly squamose, ascending to vertex, third cylindrical, half length of the second; antennæ of male thickly bipectinated; legs long, smooth.

MIGOPLASTES CEYLONICA (Plate 100, Fig. 5, ♂).

Migoplastes Ceylonica, Felder, Verh. Zool. Bot. Gesell. Wien, 1868, p. 285.
Philona correcta, Walker, Catal. Lep. Het. Brit. Mus. Suppl. i. p. 217 (1864).
Pachyphilona correcta, Butler, Trans. Ent. Soc. Lond. 1875, p. 325.

Forewing ochreous greyish-brown; crossed by two narrow very indistinct slightly darker brown waved medial discal fasciæ; two black basal spots: hindwing ochreous-yellow. Thorax ochreous greyish-brown; tegulæ and collar black spotted; abdomen ochreous-yellow, with a dorsal and two lateral rows of black spots; second and third joints of palpi blackish; legs fuliginous-brown in front; antennæ fuliginous, shaft ochreous.

Expanse $2\frac{1}{8}$ inches.

"Peradenia." (*Felder.*)

Genus DIGAMA.

Digama, Moore, Catal. Lep. E. I. C. ii. p. 298 (1858); P. Z. S. 1878, p. 4.

Forewing narrow: first branch of subcostal long, free; second at a considerable distance before end of the cell, trifurcate; fifth from near end of the cell, curved upward and looped to third at one-third its length; radial from end of the cell; discocellular nearly erect; median vein four-branched, upper from end of the cell, second and third from angles near its end: hindwing short, with two subcostal branches beyond the cell; discocellular curved outward, oblique; four median branches, three upper from end of the cell. Below the submedian vein on the underside of the forewing is a short longitudinal cavity, along the upper edge of which projects a raised transversely scabrous narrow bar, and on the upperside of the hindwing is a short transverse outwardly curved raised scabrous bar, so placed that, by the motions of this wing, it evidently plays across the longitudinal bar on the forewing, and produces a stridulating sound.

DIGAMA INSULANA (Plate 100, Fig. 3, ♀).

Digama insulana, Felder, Verh. Zool. Bot. Gesell. 1868, p. 285; Butler, Trans. Ent. Soc. 1877, p. 363; Moore, P. Z. S. 1878, p. 5.
D. Hearseyana (part), Moore, Catal. Lep. E. I. C. ii. p. 298, pl. 7, f. 3, ♂ (1858).

Male and female. Upperside: forewing pale grey-brown, basal spots prominent: hindwing ochreous-yellow, male with a grey-brown marginal streak and female with a short marginal spot situated near the middle. Head and thorax pale grey-brown, black spotted; abdomen ochreous, with dorsal black spots; antennæ brown in male; legs black banded above; palpi with terminal black bands. Underside paler; both wings with a black spot at end of the cell.

Expanse $1\frac{1}{8}$ inch.

"Colombo. Plains, in grass land. At all times common; constantly starting up from the grass and weeds by the roadside." (*Hutchison.*)

DIGAMA FASCIATA (Plate 100, Fig. 4, ♀).

Digama fasciata, Butler, Trans. Ent. Soc. 1877, p. 362.

Forewing lilacine-grey; two black dots at the base, three lunate spots on the costa, two small spots in the cell, a sigmoidal streak at its end, a dot beyond it, a less distinct transverse zigzag fascia, some spots below the cell, and a larger splash near the base: hindwing straw-yellow. Thorax, head, palpi, and legs lilacine-grey, black spotted; abdomen yellow, with dorsal and lateral black spots.

Expanse $1\frac{1}{10}$ inch.

Subfamily LITHOSIINÆ.

No stridulatory apparatus. Some genera with a glandular sac covered by a recumbent plumose lappet on costal border.

Genus ŒONISTIS.

Œonistis, Hübuer, Verz. bek. Schmett. p. 165 (1818-25); Butler, Trans. Ent. Soc. 1877, p. 356; Moore, P. Z. S. 1878, p. 13.

Forewing: first subcostal branch long, free; second arising from near end of the cell, third from its end, trifurcate; radial curving from end of the cell; discocellular bent in the middle; median vein four-branched, two upper from end, third from angle before end of the cell: hindwing—two subcostal branches immediately beyond end of the cell; two upper median branches from beyond and third from end of the cell.

ŒONISTIS ENTELLA (Plate 101, Fig. 2, ♂).

Phal. Tinea Entella, Cramer, Pap. Exot. iii. p. 27, pl. 208, f. D (1782).
Œonistis Entelliola, Hübner, Verz. bek. Schmett. p. 165.
Lithosia Entella, Walker, Catal. Lep. Het. B. M. ii. p. 495.
Œonistis Entella, Moore, Proc. Zool. Soc. 1878, p. 14.
Noctua Delia, Fabricius, Ent. Syst. iii. 2, p. 25 (1793).

Forewing straw-yellow, with a metallic purplish-blue costal band, a transverse medial hatchet-shaped band, and a subapical reversely similar band: hindwing paler yellow. Body straw-yellow, tegulæ and middle of thorax, legs and palpi above, metallic purplish-blue; antennæ brown.

Expanse $1\frac{5}{8}$ inch.

Genus BRUNIA.

Brunia, Moore, Proc. Zool. Soc. 1878, p. 15.

Forewing long, narrow; first branch of subcostal vein short, oblique, anastomosed to the costal, second starting from angle close before end of the cell, trifurcate, fifth from end of the cell and looped to third branch at its base; discocellular bent below the middle, upper end angled close to subcostal; radial from angle; two

upper median branches at half length beyond end of the cell: hindwing long, apex produced; two branches of subcostal vein at one-third beyond the cell, and two median branches at two-thirds beyond. Palpi ascending, pilose beneath.

BRUNIA ANTICA (Plate 101, Fig. 3).

Lithosia antica, Walker, Catal. Lep. Het. B. M. ii. p. 505 (1854).
Brunia antica, Moore, Proc. Zool. Soc. 1878, p. 15, pl. 1, fig. 9.

Forewing pale purplish-grey, darkest at the base; costal border yellow: hindwing pale straw-yellow. Body yellow; tegulæ and middle of thorax, front of head, tip of palpi, legs above, and antennæ purplish-grey.

Expanse $1\frac{1}{4}$ inch.

Genus KATHA.

Katha, Moore, Proc. Zool. Soc. 1878, p. 16.

Wings clothed with stout compact imbricated scales. Male: forewing long, very narrow; costa nearly straight, apex rounded; exterior margin slightly oblique; posterior margin recurved, convex near the base; slightly folded longitudinally below the median vein; cell long, narrow; discocellular bent outward at upper end and inward at lower end; first branch of subcostal vein at some distance before end of the cell, short, oblique, and anastomosed to costal; second short, arising beyond end of the cell; third trifurcate, its lowest branch at equal distance between second and fourth; radial starting from upper angle of discocellular; two upper branches of median vein at half distance from end of the cell; submedian recurved: hindwing long, broad; two subcostal branches at one-third from cell; discocellular slightly bent inward; two median branches at one-half distance from the cell and wide apart. Palpi rather short, pilose at base, porrect. Antennæ minutely pectinated. Legs long, rather stout. Body long, extending beyond hindwing. (*K. nigrifrons.*)

KATHA BREVIPENNIS (Plate 101, Fig. 4).

Lithosia brevipennis, Walker, Catal. Lep. Het. Brit. Mus. ii. p. 509 (1854).

Forewing pale mealy brownish-ochreous: hindwing pale yellow. Body brownish-ochreous; front of head, legs, and abdomen above greyish-ochreous; palpi with blackish tip.

Expanse 1 inch.

Genus CAPISSA.

Capissa, Moore, Proc. Zool. Soc. 1878, p. 19.

Forewing long, narrow, costa arched before the apex, exterior margin oblique and convex, hind margin slightly convex near the base. Male with a longitudinal fold below the cell, where the scales are raised and rough; cell short, narrow;

discocellulars of equal length, bent inward; first subcostal branch very short, oblique, anastomosed to costal; second immediately before end of the cell; third at its end and trifurcate; radial from beyond end of the cell, starting from the third branch of subcostal near its base; median vein straight, three-branched, two upper from beyond end of the cell; submedian slightly recurved: hindwing long, broad, apex produced, the male having the scales on the disc raised and rough; two subcostal and two median branches beyond end of the cell; discocellular bent inward, upper end longest. Body long, slender, extending beyond hindwing. Antennæ minutely pectinated in male, setose in female; palpi prominent, pilose at base, apex slender; legs long, slender.

CAPISSA FASCIATA (Plate 102, Fig. 2, ♂).

Capissa fasciata, Moore, Proc. Zool. Soc. 1878, p. 20, pl. 1, fig. 4, ♂.

Male. Upperside ochreous-yellow: forewing with a brown-speckled fascia along the posterior border and about the disc; hindwing and base of abdomen pale yellow. Antennæ, apical joint of palpi, and legs above brown.

Expanse 1$\frac{4}{12}$ inch.

Genus DOLGOMA.

Dolgoma, Moore, Proc. Zool. Soc. 1878, p. 20.

Male and female. Wings moderately long and broad: forewing with the subcostal vein five-branched, first branch curving upward but free from costal, second starting before end of the cell, curved upward, third trifurcate, lowest branch at one-third its length beyond the cell; upper end of discocellular erect, lower oblique and bent inward; radial starting from the middle; two upper median branches at less than one-fourth from end of the cell, lower branch angled and with a slight spur near its base: hindwing—subcostal branches at one-third and median branches at half distance beyond the cell.

DOLGOMA OBLITTERANS.

Lithosia oblitterans, Felder, Verh. Zool. Bot. Ges. 1868, p. 285.

Greyish-ochreous: forewing with the costal border paler; an indistinct blackish curved fascia beyond the middle: hindwing paler ochreous.

Expanse 1 ^{2} inch.

Genus TEGULATA.

Tegulata, Walker, Trans. Linn. Soc. 1862, p. 110; Moore, P. Z. S. 1878, p. 22.

Female: forewing with a convex protuberance on middle of the costa; apex pointed; first subcostal branch short, anastomosed to costal, second from angle before end of the cell, third trifurcate, lowest or fifth branch nearest base; discocellular angled at each end; radial from upper angle below end of the cell; median vein three-branched, two upper one-third beyond the cell.

TEGULATA BASISTRIGA (Plate 102, Fig. 3).

Tegulata basistriga, Moore, P. Z. S. 1878, p. 22, pl. 11, f. 5.

Female. Upperside pale luteous-brown: forewing brightest at the apex; slightly brown speckled; a black streak along base of costal edge and along base of posterior margin: hindwing pale brownish-fawn colour externally. Underside darker; legs brown above.

Expanse 1 inch.

Genus GAMPOLA.

Gampola, Moore, Proc. Zool. Soc. 1878, p. 26.

Male. Wings short, broad, truncate at the apex: forewing arched towards the end, apical angle acute, exterior margin nearly erect, posterior angle convex and fringed; costal edge at the base folded over and fringed for a short distance; cell long and narrow, folded beneath the median vein; subcostal at some distance from costal, five-branched, first short, anastomosing with costal but free at its end, second arising at some distance before end of the cell, third trifurcate, the upper branch at one-third beyond the cell; discocellular bent below the middle, outwardly oblique, upper end longest; radial from the angle; median vein bent upward near end of the cell, top branch from upper angle, second from lower, third from before half length of cell: hindwing quadrangular; two subcostal and two upper median branches from one-third beyond the cell, lower median from half its length. Antennæ finely pectinated; palpi small, porrect; legs slender, naked, middle and hind spurred. Body slender, short. Female. Wings longer, not truncate at apex: forewing not folded; veins as in male, excepting that the hindwing has, apparently, only one upper median branch.

GAMPOLA FASCIATA (Plate 102, Fig. 4, 4*a*, ♂ ♀).

Gampola fasciata, Moore, Proc. Zool. Soc. 1878, p. 27, pl. 11, fig. 18, ♂.

Male. Upperside: forewing pale brownish-ochreous, brown speckled, the speckles composed of dark stout scales forming a fascia below the cell and across the disc: hindwing and underside paler. Head, thorax, and abdomen fuliginous-brown, anal tuft slightly ochreous. Palpi brown at tip. Legs slightly brown above. Female: forewing not brown speckled; with an indistinct transverse dusky maculated discal band, and a small spot at posterior angle. Underside dusky at apex of forewing.

Expanse, ♂ $\frac{11}{12}$, ♀ $1\frac{1}{12}$ inch.

Genus PADENIA.

Male: forewing elongated, narrow; costa arched, apex convex; costa with a fold overlapping beneath from base to apex; costal vein extending to apex along the

upper surface at some distance from the extreme edge; cell extending to one-half the wing, narrow; first subcostal emitted at one-fourth before end of the cell, second quadrifid, the third, fourth, and fifth on a foot-stalk one-fifth from below base of second beyond end of the cell; discocellular inwardly oblique, short; three median branches emitted together at one-third before end of the cell; submedian recurved downward: hindwing short, broad, quadrate, frenulum long and slender; costa short; exterior margin deeply excavated below the apex; a fringe of very long fine silky hairs along the costal edge; no costal vein visible; cell very broad at end; first subcostal emitted immediately before end of the cell and extending to apex, second extending to middle of the excavation; discocellular very slender, curved outward, radial near the upper end; middle median from angle below end of the cell, bifid at two-thirds beyond its base, lower at one-third before end of the cell; submedian, and internal vein straight. Body short, thorax stout, anal segment tufted; palpi very slender, porrect, projecting slightly beyond the head; proboscis moderate; antennæ minutely bipectinated. Female: forewing not folded over on the costal margin: hindwing extending to posterior angle of forewing, not excavated below the apex; no costal fringe.

PADENIA TRANSVERSA (Plate 103, Fig. 1, ♂).

Cyllene transversa, Walker, Catal. Lep. Het. Brit. Mus. ii. p. 544 (1854).
Lithosia bifasciata, Felder, Reise Novara, Lep. iv. pl. 106, fig. 11 (1870).

Creamy-white: forewing with a transverse antemedial and a waved oblique postmedial purple-black band. Thorax with a blackish spot on each tegula, and a scutellate spot on the middle; antennæ, palpi, and legs yellow.

Expanse $\frac{7}{10}$ to $\frac{9}{10}$ inch.

Genus GARUDINIA.

Form of wings in male and female and the venation as in *Padenia*: forewing of male with a glandular patch of hairy scales in middle of the cell on the underside: hindwing with a depressed patch on the costal border on the upperside.

GARUDINIA LATANA (Plate 103, Fig. 2, ♂).

Tospitis latana, Walker, Catal. Lep. Het. Brit. Mus. xxviii. p. 427 (1863).

Creamy-white: forewing with a broad purple-black lower subbasal short constricted band, and an oblique subapical entire band, the outer border of the latter undulated: hindwing tinged with a pale brown apical border.

Expanse $\frac{5}{10}$ to $\frac{7}{10}$ inch.

Genus BIZONE.

Bizone, Walker, Catal. Lep. Het. Brit. Mus. xi. p. 548 (1854).
Chionœma, H. Schæffer, Aussereurop. Schmett. p. 21 (1858).

Forewing elongated, narrow; costal margin in the male distorted and furnished with a plumose lappet in the middle; cell extending more than half the wing; first subcostal emitted at nearly one-half before end of the cell, distorted, provided with a lengthened glandular sac, below which, on the underside of the wing, is a concave scabrous patch of scales; second subcostal near end of the cell, fifth from below third at about one-fourth beyond end of the cell; discocellular concave, distorted, radial from its middle; median recurved to end of the cell, two lower branches from near the end; submedian slightly recurved: hindwing broad; in the male the costal margin is short, the exterior margin being produced outward below the apex, thus giving the wing a quadrate form; on upperside of the wing is a scabrous patch of scales below the submedian; costal vein extending to apex, joined to subcostal to beyond half length of the cell, two subcostal branches from end of the cell; discocellular bent inward in the middle, radial very slender, scarcely visible; cell extending half the wing, wide; three median branches from end of the cell, upper bifid, the middle branch being thrown off at two-thirds beyond the cell; submedian and internal vein wide apart. Body slender; abdomen extending beyond hindwings, tufted in male; palpi porrect, laxly pilose; antennæ very finely bipectinated; legs slender, smooth. (*B. puella.*)

BIZONE PUELLA (Plate 103, Fig. 3, 3*a*, ♂ ♀).

Phalœna N. puella, Drury, Exot. Ins. ii. p. 3, pl. 2, fig. 2, ♂, App. p. 2 (1773).
Bizone puella, Walker, Catal. Lep. Het. B. M. ii. p. 549; Moore, Catal. Lep. Mus. E. I. C. i. p. 305, pl. 13, fig. 13, 13*a*.

Forewing pure white; with a basal, an antemedial, a postmedial, and a marginal vermillion band, the two former and the two latter confluent on the extreme costal edge, the ante and postmedial bands slightly black bordered, the basal band with a slight black spot; three black spots near the costa between the two middle bands in the male, and one spot only in the female: hindwing whitish, the outer borders pinkish, brightest in the female. Body white; thorax with vermillion bands; abdomen purplish basally; palpi pink; antennæ, and legs above red.

Expanse, ♂ 1, ♀ $1\frac{1}{10}$ inch.

"In forest land. Plains. June." (*Hutchison.*)

BIZONE SUBORNATA (Plate 103, Fig. 4, ♀).

Bizone subornata, Walker, Catal. Lep. Het. Brit. Mus. ii. p. 550, ♀ (1854).

Forewing pure white; female with four narrow transverse vermillion bands,

a slight black spot on the basal band, and three spots within the cell between the two middle bands: hindwing whitish, outer area pale pink. Body white; thorax with red bands, basal segments of abdomen pinkish; shaft of antennæ whitish; legs white, fore and middle tibia with brown bands and tarsi with red bands; palpi brown edged beneath with white.

Expanse $1\frac{3}{8}$ inch.

Genus ADITES.

Forewing elongate, rather broad; costa arched; first subcostal emitted at two-fifths before end of the cell, short, anastomosed to costal; second at one-fifth before the end, third from end of the cell, trifid, fifth at one-third from base of third; radial from upper end of the cell; discocellular concave; two upper medians from angles at end of the cell, second at one-fifth, first (or lower) at one-half before the end; submedian curved: hindwing triangular, broad; costal vein extending to apex; subcostal joined to costal to near end of the cell; two subcostal branches on a foot-stalk nearly three-fourths beyond the cell; discocellular concave; three upper medians from angles at end of the cell, lower at nearly one-half before the end; submedian and internal vein nearly straight. Body short; palpi porrect, slender, extending beyond the head, laxly pilose beneath; legs stoutish, smooth; antennæ finely bipectinated to tip in both sexes.

ADITES HILARIS (Plate 104, Fig. 6, ♀).

Doliche hilaris, Walker, Catal. Lep. Het. Brit. Mus. ii. p. 530 (1854).

Forewing white, crossed by four equi-distant brownish-ochreous sinuous bands, the three inner bands medial, the fourth submarginal and with broad outer angles; two brownish-ochreous subbasal spots, a black basal and a discocellular spot: hindwing ochreous-white. Body white; thorax spotted with brownish-ochreous; palpi and legs with ochreous bands.

Expanse, ♂ $\frac{7}{8}$, ♀ 1 inch.

Genus BARSINE.

Barsine, Walker, Catal. Lep. Het. B. M. ii. p. 546 (1854).
Ammatho, Walker, *id.* pt. iii. p. 759 (1855).
Hypocrita, Herr. Schæffer, Lep. Exot. fig. 438 (1855); *id.* p. 20 (1858).

Forewing lengthened, narrow, exterior margin oblique; cell broad, extending more than half the wing; first subcostal emitted at one-fifth, and second at one-tenth before end of the cell, third trifid, fourth and fifth at equal distances apart; discocellular deeply concave, radial from near upper end; two upper medians from contiguous angles at end of the cell, second at one-eighth, and first (or lower) at one-third before end of the cell; submedian widely separated from median, curved

downwards towards the margin: hindwing short, broad; cell wide; costal and subcostal joined to two-thirds length of the cell; two subcostal branches on a foot-stalk one-third beyond the cell; discocellular acutely bent in the middle; two upper medians from acute angle at end of the cell, second from close to end, first at nearly one-half before the end; submedian and internal straight. Body moderately slender; palpi porrect, slender, laxly squamose; legs short, thick, femora pilose beneath; antennæ sparsely and finely bipectinated. (*B. striata.*)

BARSINE CUNEONOTATUS (PLATE 103, FIG. 10, ♀).

Ammatho cuneonotatus, Walker, Catal. Lep. Het. Brit. Mus. iii. p. 759 (1855).

Ochreous-red: forewing with a transverse basal, three medial, and an outer series of vermillion streaks, the transverse intervening spaces and the veins fuliginous-grey: hindwing pale reddish-cinereous. Body ochreous-red; thorax with blackish spots; antennæ, palpi, and legs red.

Expanse $1\frac{2}{10}$ to $1\frac{4}{10}$ inch.

Genus LYCLENE.

Cyllene,* Walker, Catal. Lep. Het. Brit. Mus. ii. p. 543 (1854).
Lyclene, Moore, Catal. Lep. Mus. E. I. C. ii. p. 300 (1858).

Forewing lengthened, narrow; cell extending two-thirds the wing; first subcostal emitted at one-third before end of the cell, ascending to costal and anastomosed to it for a short distance; second at one-seventh before the end; third trifid; discocellular inwardly oblique, radial from upper end; two upper medians from angles at end of the cell, second at one-sixth and first at nearly one-half before end of the cell; submedian curved downward: hindwing short; costal and subcostal veins united to within one-tenth of end of the cell; two subcostal branches on a foot-stalk one-fourth beyond the cell; discocellular bent inward below the middle; three upper medians at equal angles at end of the cell, lower at one-third before the end. Body small, tufted in female; palpi very slender, porrect; antennæ finely bipectinated; legs smooth.

LYCLENE ARCUATA (PLATE 103, FIG. 5).

Forewing pale red; with a small blackish spot at base of the cell, a spot on costal border at one-fifth from the base, a transverse medial inwardly curved band terminating above the submedian vein, a spot at end of the cell, a transverse discal zigzag band, and very indistinct minute marginal dots: hindwing paler red. Body, palpi, and legs pale red.

Expanse $\frac{5}{8}$ inch.

Near to *L. rubricosa* (Moore, P. Z. S. 1878, p. 30), from Bombay.

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* Previously used for a genus of Coleoptera.

LYCLENE ILA (Plate 103, Fig. 6).

Lyclene Ila, Moore, Catal. Lep. Mus. E. I. C. ii. p. 300 (1858).

Male: forewing yellowish-ochreous; a series of four or five minute purplish-brown spots curving outward and downward from the base, a broad transverse slightly curved medial purple-brown band, a spot at end of the cell, a recurved transverse discal series of nine short linear spots, and a marginal row of smaller spots: hindwing pale yellow. Female: forewing with a broader medial band, the cell spot and the lower discal spots being confluent with the band: hindwing with an indistinct transverse pale purplish-brown medial band. Body, palpi, and antennæ yellowish-ochreous; thorax black spotted; legs with blackish bands.

Expanse, ♂ $\frac{7}{10}$, ♀ $\frac{8}{10}$ inch.

LYCLENE SEMIFASCIA (Plate 103, Fig. 7).

Setina semifascia, Walker, Catal. Lep. Het. Brit. Mus. ii. p. 521 (1854).
Nepita semifascia, Butler, Trans. Ent. Soc. 1877, p. 336.

Male and female. Pale dull yellow: forewing with a small blackish spot at the base, a subbasal zigzag series of spots, three spots below the cell, a zigzag macular band, and a submarginal macular band; the basal spot and a spot at end of the cell more distinct than the others: hindwing with a faintly defined brownish marginal band. Body, palpi, antennæ, and legs pale yellow.

Expanse $\frac{7}{8}$ to 1 inch.

Genus SETINA.

Setina, Schrank, Fauna Boica, ii. 2, p. 165 (1802); Stephens, Brit. Ent. Haust. ii. p. 98; Walker, Catal. Lep. Het. B. M. ii. p. 514.
Cybosia et *Endrosa*, Hübner, Verz. bek. Schmett. p. 167 (1818-25).
Philea, Dalman, Zett. Ins. Lap. p. 931 (1823).

Forewing elongate; exterior margin convex; cell extending two-thirds the wing; first subcostal branch short, anastomosed to costal, emitted at one-third, and second at one-sixth before end of the cell, third trifid, radial from upper end of cell; discocellular bent inward in the middle; an apparently slender discoidal veinlet emitted within the cell; two upper medians from pointed angle at end of the cell, second at one-eighth and first at one-half before end of the cell; submedian slightly curved: hindwing broadly triangular; costal vein extending to apex, joined to subcostal to more than half length of the cell; two subcostal branches at one-third beyond the cell; discocellular bent in the middle; cell two-thirds length of the wing; upper median bifid at three-fourths from its base, the second from angle at end of the cell, first (or lower) at two-fifths before the end; submedian and internal vein slightly curved. Body short, laxly squamose; head small, pilose in front; palpi very minute; antennæ finely pectinated; legs smooth, tarsi short. (*S. irrorella.*)

SETINA SOLITA (Plate 103, Fig. 8).

Setina solita, Walker, Catal. Lep. Het. B. M. i. p. 521 (1854).

Pale ochreous-yellow: forewing with a very small black basal spot, four or five oblique subbasal spots, one at end of the cell, an oblique row beneath the cell, a recurved transverse discal series of nine or ten very short streaks, and a marginal row of dots: hindwing paler yellow.

Expanse 1 inch.

SETINA PUNCTILINEA (Plate 103, Fig. 9).

Setina punctilinea, Moore, Proc. Zool. Soc. 1878, p. 34, ♂.

Male. Upperside: forewing yellow; a black streak on base of costal margin, a spot below it, two small very indistinct subbasal spots, one at end of the cell, and a more prominent marginal row of spots: hindwing and abdomen pale yellow. Thorax black spotted. Legs black streaked above.

Expanse $\frac{10}{12}$ inch.

Genus ÆMENE.

Æmene, Walker, Catal. Lep. Het. Brit. Mus. ii. p. 541 (1854).
Panassa, Walker, *id.* Suppl. p. 607 (1865).
Autoceras, Felder et Rogenh. Reise Novara, Lep. iv. pl. 106, f. 24 (1874).

Forewing elongated; costal and subcostal vein wide apart; cell long, narrow, extending two-thirds the wing; first subcostal branch emitted at one-half and second at one-eighth before end of the cell; third trifid, fifth at one-third from below base of third; discocellular bent outward near upper end, radial from the angle; three upper medians from angles at end of the cell, lower at one-half before the end; submedian waved: hindwing triangular; costal vein extending to apex, joined to subcostal to half length of the cell; two subcostal branches on a foot-stalk half length beyond the cell; discocellular slightly concave; two upper medians from end of the cell, lower at one-eighth before the end; submedian and internal vein nearly straight. Body slender; palpi porrect, slender, extending slightly beyond vertex; antennæ bipectinated in male, simple in female; legs smooth.

ÆMENE TAPROBANIS (Plate 104, Fig. 2).

Æmene taprobanis, Walker, Catal. Lep. Het. B. M. ii. p. 542 (1854).
Panassa cingalesa, Walker, *id.* Suppl. 2, p. 607 (1865).
Autoceras grammophora, Felder, Novara Reise, Lep. iv. pl. 106, fig. 24 (1874).

Forewing creamy greyish-white; with two black angular spots at the base, an antemedial transverse zigzag band, more or less thickened and confluent, a spot in middle of the cell, a medial transverse zigzag band, a spot at end of the cell, a discal

zigzag band, followed by a blurred similar outer band, and a marginal row of spots, the upper, middle, and lowest of which cross the cilia: hindwing greyish-white, greyest externally. Body greyish-white, tegulæ with a lower black spot; abdomen greyish above; palpi and legs above with blackish bands.

Expanse, ♂ $\frac{7}{8}$, ♀ 1 inch.

ÆMENE GUTTULOSANA (Plate 104, Fig. 3).

Tospitis guttulosana, Walker, Catal. Lep. Het. B. M. xxviii. p. 429 (1863).
Æmene guttulosana, Butler, Trans. Ent. Soc. 1877, p. 373.

Forewing creamy-white, with two distinct black spots obliquely at the base, an antemedial transverse series of five spots, the upper and third of which are large, a small spot in middle of the cell and a large spot at its end, a large spot on middle of the costa, and a blurred sagittate mark below the cell, a discal zigzag almost confluent row of small dentate spots, a sinuous subapical streak, and a marginal row of small spots; the cilia thrice black spotted: hindwing greyish-white. Body creamy-white, abdomen above greyish; palpi and legs above with blackish bands.

Expanse, ♂ $\frac{7}{10}$, ♀ $\frac{8}{10}$ inch.

ÆMENE SORDIDA (Plate 104, Fig. 4).

Æmene sordida, Butler, Trans. Ent. Soc. 1877, p. 372.

Forewing pale purplish-grey, with two indistinctly defined black-speckled basal spots and two subbasal spots, a transverse antemedial zigzag series of five spots, one in middle of the cell and one at its end, a blurred bisinuated blotch below the cell, a discal transverse zigzag blotchy series of spots, and a more uniformly regular marginal row of spots; cilia with three blackish quadrate spots: hindwing paler purplish-grey. Body pale purplish-grey; palpi and legs above with blackish bands.

Expanse $\frac{7}{10}$ inch.

Genus NOLA.

Nola, Leach, Edinb. Encycl. ix. p. 135 (1815); Samouel, Ent. Comp. p. 244 (1819); Stephens, Brit. Ent. Haust. iv. p. 61 (1834).
Roeselia, Hübner, Verz. bek. Schmett. p. 397 (1825-7).

Wings small. Forewing elongated, pointed at apex, exterior margin oblique; with three patches of slightly raised scales along the costal border within the cell; cilia prominent; cell extending two-thirds the wing; first subcostal branch emitted at one-tenth before end of the cell, second bifid, the third being thrown off at one-half beyond its base; discocellular outwardly oblique, radial from near the middle; two upper medians from angles at end of the cell, second at one-fifth and first (or lower) at two-fifths before end of the cell; submedian curved downward: hindwing triangularly oval; cilia prominent; costal vein extending to apex, joined to subcostal to

half length of the cell; two subcostal branches on a foot-stalk one-half beyond the cell; discocellular outwardly oblique; cell broad; three median branches, the upper from angle above end of the cell, second from the end, the lower from one-third before the end; submedian and an internal vein slightly curved. Body short, thorax rather stout, head very small; palpi porrect, thick, laxly and coarsely squamose beneath, long, projected three-fourths its length beyond the head; antennæ very minutely bipectinated, basal joint thick and with a fascicle of long scales beneath; legs rather long, slender, smooth. (*N. palliolalis* = *cucullatella*).

NOLA CINGALESA (Plate 104, Fig. 1).

Forewing greyish-white; a black triangular spot at base of the costa, a transverse antemedial outwardly curved line thickening into a rounded spot in crossing the cell, a blurred tridentate mark from the costa above end of the cell, a postmedial transverse undulated line, and a submarginal zigzag less distinct fascia: hindwing greyish. Body greyish; thorax white; second joint of palpi with a lateral black band; legs with black bands above.

Expanse $\frac{8}{12}$ inch.

Genus NEPITA.

Pitane,* Walker, Catal. Lep. Het. B. M. ii. p. 531 (1854).
Nepita, Moore, Catal. Lep. Mus. E. I. C. ii. p. 302 (1858-9).

Wings longer and narrower than in Adites. Venation similar, except that in the forewing the second median branch is one-eighth and the first (or lower) is less than one-third before end of the cell. Palpi short, laxly pilose, not extending to front of the head; antennæ in male long, bipectinate, the pectinations finely plumose, antennæ in female serrated; body short, with a dense anal tuft in female.

NEPITA CONFERTA (Plate 104, Fig. 7, 7*a*, ♂ ♀, *b*, *c*, *d*, larva).

Pitane conferta, Walker, Catal. Lep. Het. B. M. ii. p. 533 (1854).
Nepita signata, Walker, Catal. Lep. Het. B. M. Suppl. p. 240 (1864).

Male and female. Reddish-ochreous; cilia dark ochreous-brown: forewing crossed by four dark ochreous-brown zigzag bands, the angles of the outer band confluent with the exterior margin; a black basal spot, and a spot at end of the cell: hindwing with a broad outer marginal ochreous-black band, and a small spot at end of the cell. Body reddish-ochreous; thorax and legs black spotted; abdomen with broad black dorsal bands; antennæ black.

Expanse, ♂ $1\frac{7}{8}$, ♀ 1 inch.

Larva short, tumid in the middle; purple-black; each segment thickly covered

* Previously used for a genus of Lepidoptera.

with tufts of long black hairs, the tufts most dense at their base; some orange-yellow dorsal marks on third, eighth, and last segment, and a slender line between the latter. Pupa reddish, in a lax hairy cocoon.

"Puselawe. Hills, 3000 feet. On cultivated ground, during S.W. Monsoon." (*Hutchison.*)

Genus UTETHEISA.

Utetheisa, Hübner, Verz. bek. Schmett. p. 168 (1818-25).
Deiopeia, Stephens, Illust. Brit. Ent. Haust. ii. p. 92 (1829).

Forewing long, narrow; cell long, narrow, extending to two-thirds the wing; first subcostal emitted at one-tenth and second at one-twelfth before end of the cell, second trifid, fifth from end of the cell and anastomosed to third for a short distance above its base; discocellular bent outward close to upper end and inward in the middle, radial from upper angle; three upper medians from angles at end of the cell, lower beyond one-third before the end; submedian extending close to the margin: hindwing broad; exterior margin oblique and almost angular before the end; cell broad, extending nearly to two-thirds the wing; costal joined to subcostal to one-third from the base, and terminating at the apex; two subcostal branches from end of the cell; discocellular bent inward and outward below the middle, radial from the lower angle; two upper medians from end of the cell, lower at nearly one-half before the end; submedian and internal straight. Body moderately slender; palpi porrect, laxly squamose beneath, second joint extending to vertex, third joint short, thick; antennæ very finely pectinated; legs smooth.

UTETHEISA PULCHELLA (Plate 104, Fig. 5, ♂).

Phal. Tinea pulchella, Linnæus, Syst. Nat. i. 2, p. 884 (1767).
Deiopeia pulchella, Stephens, Illust. Brit. Ent. Haust. ii. p. 93; Walker, Catal. Lep. Het. B. M. ii. p. 566.
Utetheisa pulchella, Moore, Catal. Lep. Mus. E. I. C. ii. p. 306, pl. 14, fig. 1, 1*a*, larva.
Utetheisa pulchra, Hübner, Verz. bek. Schmett. p. 168.
Phal. Geom. Lotrix, Cramer, Pap. Exot. ii. pl. 109, fig. E (1779).

Forewing pale ochreous-yellow; crossed by five nearly equidistant zigzag serial rows of small black spots, which are more or less quadrate, followed by a marginal linear row of similar spots; between the fourth and fifth row are two pairs of similar spots, and between the transverse rows are some irregular shaped scarlet spots: hindwing pure white, with a black irregular bordered marginal band and a streak at end of the cell. Thorax and head ochreous-yellow, spotted with black; abdomen white; tip of palpi black; legs black streaked; antennæ black.

Expanse $1\frac{4}{10}$ inch.

"Colombo. On grass land. A slow flier. When disturbed flies a short way and settles again in the grass." (*Hutchison.*)

Genus ARGINA.

Argina, Hübner, Verz. bek. Schmett. p. 167 (1818-25).
Xanthestes, Rambur, Faune Lep. de l'Andalousie, ii. p. 229 (1866).

Forewing elongated, triangular; cell extending to two-thirds the wing; first subcostal emitted at one-eighth before end of the cell, second trifid, fifth from end of the cell, ascending and anastomosed to third for a short distance beyond its base; discocellular concave, radial from upper end of the cell; three upper medians from angles at end of the cell, lower at two-fifths before the end; submedian curved downward towards the margin: hindwing short, broad; apex very convex, slightly concave before anal angle, the angle being produced to a point in the male; cell narrow, disposed towards middle of the wing and extending beyond two-thirds its length; costal vein extending to apex; subcostal slightly joined to costal for a short distance near its base; two subcostal branches from end of the cell; discocellular slightly bent inward, radial from near lower end; two upper medians from angles at end of the cell, lower at one-third before the end. Body moderately slender; palpi porrect, laxly squamose beneath, second joint extending beyond the vertex, third joint short, stout; antennæ stoutly pectinated, legs smooth, rather short, femora thick.

ARGINA CRIBRARIA (Plate 106, Fig. 1, 1*a*, ♂ ♀).

Phalæna cribraria, Clerck, Icones Ins. ii. pl. 54, fig. 4 (1759-64), ♀.
Phalæna Geom. cribraria, Cramer, Pap. Exot. iii. pl. 208, fig. C, G (1782), ♂ ♀.
Argina cribraria, Aurivillius, Kongl. Vet. Akad. Handlingar, xix. p. 181 (1882).
Phalæna Noct. Astrea, Drury, Illust. Exot. Ins. ii. p. 11, pl. 6, f. 3; App. p. ii. (1773), ♀.
Deiopeia Astrea, Westwood Edit. Drury, pl. 6, f. 3; Walker, Catal. Lep. Het. B. M. ii. p. 570.
Argina Astrea, Moore, Catal. Lep. Mus. E. I. C. ii. p. 308, pl. 14, fig. 2, 2*a*.
Bombyx Pylotis, Fabricius, Syst. Ent. p. 585 (1775), ♀.
Hipocrita pylotis, Hübner, Samm. Exot. Schmett. i. pl. 189, fig. 1, 4, ♂.
Xanthestes guttata, Rambur, Lep. Andal. ii. p. 229 (1866).
Argina notata, Butler, Trans. Ent. Soc. 1875, p. 365, ♀.

Male. Bright ochreous-yellow: forewing crossed by six zigzag series of pale yellow-bordered black spots, and two pair of similar spots between the fourth and fifth row, the rows being disposed much like those in Utetheisa pulchella: hindwing with a black costal spot, one at end of the cell, two beneath it, three submarginal more linear-shaped spots, and a smaller one at anal angle. Female: forewing darker, either ochreous-yellow or reddish-ochreous, generally with more prominent pale yellow borders to the black spots; in some females these spots are uniformly larger, and have comparatively little or no pale borders: hindwing with similar spots to the male, the submarginal anterior spots being confluent and followed by two or three small marginal spots, another spot also being above the anal angle.

Expanse, ♂ $1\frac{3}{8}$, ♀ $1\frac{3}{8}$ to $1\frac{4}{8}$ inch.

ARGINA SYRINGA (Plate 105, Fig. 2, 2*a*, ♂ ♀, *b*, *c*, larva).

Phalæna Geom. Syringa, Cramer, Pap. Exot. i. p. 8, pl. 5, fig. C, D (1779).
Deiopeia Syringa, Walker, Catal. Lep. Het. B. M. ii. p. 572.
Bombyx Crotalaria, Fabricius, Ent. Syst. iii. 1, p. 473 (1793).
Argina Crotalaria, Hübner, Verz. bek. Schmett. p. 167.

Forewing brownish-ochreous; crossed by six equidistant zigzag rows of slender yellow-bordered black spots, the rows indistinctly margined with fuliginous-brown, the spots of the second, third, and fourth rows mostly transversely linear, the others longitudinally short; a similar streak also at end of the cell: hindwing pale scarlet, with a black costal spot, a large spot at end of the cell, two transverse series beneath, a submarginal series, and some smaller marginal spots. Female: forewing duller coloured, the markings also duller; hindwing brighter scarlet, the black spots forming more or less transverse bands. Thorax and head brownish-ochreous, black spotted and with a scarlet collar; abdomen scarlet, with black dorsal and lateral spots; legs ochreous-brown.

Expanse, ♂ $1\frac{3}{4}$, ♀ $2\frac{1}{4}$ inches.

Larva purplish-grey, sparsely hairy; the segments with dorsal transverse black streaks and lateral spots; head red; middle and hind legs reddish, front legs black. Pupa reddish and black streaked beneath, yellowish and black spotted above; within a cocoon of very thin network.

"Feeds on Crotalaria." (*Thwaites.*)

ARGINA ARGUS (Plate 105, Fig. 1, 1*a*, ♂ ♀, 1 *b*, *c*, larva).

Euprepia Argus, Kollar, Hügel's Kaschmir, iv. p. 467, pl. 21, fig. 3 (1844).
Deiopeia Argus, Walker, Catal. Lep. Het. B. M. ii. p. 572.
Argina Argus, Moore, Catal. Lep. Mus. E. I. C. ii. p. 309, pl. 14, fig. 3, 3*a*.

Forewing dull scarlet, with six transverse series of prominent yellow-bordered black spots, the three basal series very irregularly disposed, the fourth and fifth series recurved across the disc, the sixth submarginal and more or less obsolete: hindwing brighter scarlet, with a large black spot at end of the cell, two smaller spots beneath, two submarginal and one above anal angle. Body dull scarlet, black spotted; legs dull scarlet.

Expanse, ♂ 2, ♀ $2\frac{3}{8}$ inches.

Larva cylindrical, slightly thickened towards the end, purple-black, with a few dorsally disposed short black hairs; head, and a short longitudinal lateral streak on fifth to eleventh segments reddish; a dorsal row of short transverse white streaks; legs black. Pupa reddish, longitudinally black streaked beneath, and black spotted above.

"Feeds on *Crotalaria*." (*Thwaites.*)

Family ARCTIIDÆ.

Forewing elongated, narrow. Body very robust, thorax woolly; antennæ bipectinated.

Larva densely tufted with long hairs. Pupa in a large hairy silken cocoon.

Genus ALOPE.

Alope, Walker, Catal. Lep. Het. B. M. iii. p. 619 (1855).

Forewing elongated; cell extending two-thirds its length; first subcostal emitted at one-eighth before end of the cell, second quadrifid; discocellular deeply concave, radial from slight angle close to subcostal; three upper medians from contiguous angles at end of the cell, lower at two-fifths before the end; submedian slightly curved: hindwing short, broad; cell extending nearly two-thirds the wing; costal and subcostal joined together from near base to half length of the cell; two subcostal branches from end of the cell; discocellular slender, bent inward in the middle, apparently emitting a slender veinlet within the cell from the angle, radial from near lower end; two upper medians from angles at end of the cell, lower at two-fifths before the end; two submedians and an internal vein, upper submedian slender. Body robust; thorax and head densely clothed with short hairs; palpi porrect, pilose, second joint extending beyond the vertex, third joint short, thick; antennæ stoutly bipectinated in male; legs thick, pilose beneath.

ALOPE RICINI (Plate 106, Fig. 2, 2*a*, ♂ ♀, *c*, larva).

Bombyx Ricini, Fabricius, Syst. Ent. p. 583 (1775); Ent. Syst. iii. 1, p. 473 (1793).
Alope ocellifera, Walker, Catal. Lep. Het. B. M. iii. p. 620 (1855).

Forewing greyish-brown, with six transverse macular bands composed of irregular shaped pale ochreous-bordered dark brown spots, and a marginal row of similar spots: hindwing red, palest in the male; with three dark brown spots on the costal border, one at end of the cell, one below the apex, and two towards the anal angle, and a broken streak on upper part of exterior margin. In the female these spots on the hindwing are replaced by three more or less complete irregular shaped bands across the wing, and in some males they also form similar bands. Thorax, head, palpi, and legs greyish-brown; thorax similarly spotted; palpi and legs with pale bands; abdomen red, with dorsal and lateral bands.

Expanse $1\frac{1}{2}$ to $2\frac{1}{2}$ inches.

Larva dark brown, white speckled; with dorsal and lateral tufts of fine hairs. Pupa dark brown, within an oval, hairy, silken cocoon.

"Feeds on Notonia and Fagræa." (*Thwaites.*)

"Puselawe. In gardens. Reared from larvæ found feeding on Dahlia." (*Hutchison.*)

Genus SPILARCTIA.

Spilarctia, Butler, Cistula Ent. ii. p. 39 (1875); Illust. Types Lep. Het. B. M. iii. p. 5 (1879).

Forewing elongated, triangular; cell extending two-thirds the wing; first subcostal emitted at one-fifth before end of the cell, second quadrifid; discocellular concave, radial from upper end of the cell; three upper medians from contiguous angles at lower end of the cell, lower median at one-half before end of the cell; submedian recurved downward: hindwing short, apex convex; costal and subcostal veins joined together to one-third from the base; costal extending to apex; two subcostal branches at end of the cell; discocellular bent in the middle; radial, and two upper medians from angles at end of the cell, lower median at one-half before end of the cell; submedian and internal vein straight. Body stout; head and thorax pilose; palpi porrect, pilose beneath, second joint extending beyond the head, third joint smooth, short, thick; antennæ thickly bipectinated in male; legs short, thick, femora pilose beneath. (*S. lubricipeda.*)

SPILARCTIA SUBFASCIA (Plate 107, Fig. 3, 3*a*, ♂ ♀).

Spilosoma subfascia, Walker, Catal. Lep. Het. B. M. iii. p. 678 (1855).

Male. Yellowish ochreous-white: forewing with three small black costal spots, two below on the subcostal vein, an oblique transverse discal series of spots, and two or three dots below the apex: hindwing with four black dots at the apex, and a black streak near anal angle. Female paler: forewing with less distinct costal spots, the discal series represented only by some small dots at each end: hindwing with slightly indicated subanal spots. Thorax with a black spot on each side, and an indistinct testaceous band in front; abdomen ochreous-yellow above, with dorsal and lateral row of black spots; palpi, and antennæ black; tarsi, and anterior tibæ, and fore femora above black; hind femora and tibiæ with black tips.

Expanse, ♂ $1\frac{6}{10}$, ♀ $2\frac{2}{10}$ inches.

Genus PANGORA.

Pangora, Moore, Desc. Lep. Coll. Atkinson, p. 42 (1879).

Forewing long, narrow, apex slightly pointed, exterior margin short and oblique; cell narrow, extending to two-thirds the wing; first subcostal emitted at one-fifth before the end of the cell, second quadrifid; discocellular bent in the middle, radial from upper end; two upper medians from angles above end of the cell, second at a short distance before end, first (or lower) at near three-sevenths before the end; submedian extending close along the margin: hindwing short, broad; costal and subcostal joined together from near the base to about half length of the cell; two subcostal branches from end of the cell; discocellular bent inward in the middle;

radial and two upper medians from contiguous angles at end of the cell, lower median at nearly one-half before end of the cell; submedian and internal vein straight. Body stout; palpi porrect, clothed with adpressed scales, apex pointed; legs smooth, hind tibiæ thick, femora slightly pilose beneath; antennæ minutely serrated in male.

PANGORA EROSA (Plate 107, Fig. 1, 1*a*, ♂ ♀, *b*, larva).

Aloa erosa, Walker, Catal. Lep. Het. B. M. iii. p. 708 (1855).

Forewing ochreous-brown, with a basal irregular bordered zigzag pale pinkish band, and two or three similar coloured marginal spots, the upper one of which is disposed at the apex: hindwing scarlet, with a broad irregular bordered brown submarginal band, and in the female a slight streak at end of the cell. Thorax pale pink; two brown spots on the collar, one on each tegula, and a large scutellate spot above; collar, pectus, and palpi red streaked; abdomen scarlet, with dorsal and lateral black spots; legs brown, femora red streaked above.

Expanse, ♂ 2, ♀ 2½ inches.

Larva dark brown, clothed with dense tufts of blackish hairs. Pupa dark brown, within a dense hairy cocoon.

"Feeds on Gloriosa superba, &c." (*Thwaites.*)

"Taken at Kegalle. In low country forest in June. Larvæ reared on *Thunbergia*." (*Hutchison.*)

Genus RAJENDRA.

Rajendra, Moore, Desc. Lep. Coll. Atkinson, p. 43 (1879); P. Z. S. 1879, p. 396.

Forewing elongated, narrow, exterior margin oblique, posterior angle very convex; first subcostal emitted at one-sixth before end of the cell, second quadrifid; discocellular bent inward in the middle, radial from upper end; two upper median branches from acute angle at end of the cell, second from close to the end, and first (or lower) at one-third before the end; submedian curved downward: hindwing short, exterior margin very convex; costal and subcostal joined together to half length of the cell; two subcostal branches from end of the cell; discocellular concave, radial and upper median from acute angle at end of the cell, middle median from close to the end, lower at beyond one-third; one median and an internal vein. Body stout; palpi porrect, laxly squamose beneath; legs short, stoutish; antennæ very minutely pectinated. (*R. lativitta.*)

RAJENDRA IRREGULARIS (Plate 107, Fig. 2).

Forewing blackish-brown; with a longitudinal irregular bordered creamy-white band curving from the base to apex, the lower border of the band being slightly excavated near the base, and the upper border indented at end of the cell: hindwing

pale crimson-red, with a blackish-brown costal band and submarginal spots. Thorax brown; sides of thorax and head above pinkish-white, tegulæ with a brown spot; palpi, and legs, brown, femora red streaked; abdomen crimson, with dorsal and lateral black spots.

Expanse $1\frac{3}{8}$ inch.

Intermediate between *R. lativitta* and *R. biguttata.*

Genus CREATONOTUS.

Creatonotus, Hübner, Verz. bek. Schmett. p. 169 (1818-25); Walker, Catal. Lep. Het. B. M. iii. p. 637 (1855).

Wings shorter than in Aloa: forewing more regularly fusiform in shape; venation similar. Palpi smaller, shorter, apical joint very short and pilose; antennæ finely biserrated in male; legs shorter, less regularly squamose.

CREATONOTUS INTERRUPTUS (Plate 108, Fig. 5, 5*a*, ♂ ♀).

Phalæna-Bombyx interrupta, Linnæus, Syst. Nat. i. ii. p. 840 (1767); Sulzer, Ins. pl. 22, fig. 3; Cramer, Pap. Exot. ii. p. 136, pl. 185, fig. E.

Creatonotus interrupta, Hübner, Verz. bek. Schmett. p. 170; Walker, Catal. Lep. Het. Brit. Mus. iii. p. 638; Moore, Catal. Lep. Mus. E. I. C. ii. p. 362, pl. 17, f. 1, 1*a*.

Bombyx Francisca, Fabricius, Mant. Ins. ii. p. 131; Ent. Syst. iii. 1, p. 480.

Male: forewing pinkish-ochreous, with an interrupted black streak extending from base below the cell to near the apex; two black dots at end of the cell and one at the posterior angle: hindwing fuliginous-brown, darkest externally, and sometimes with three indistinct darker marginal spots. Female: forewing paler ochreous; the black band distinct: hindwing whitish-ochreous; marginal spots less defined. Thorax ochreous, with a black longitudinal band; abdomen above more or less dark crimson, with short black dorsal and lateral spots; front of head, abdomen, and legs beneath greyish-black; femora above ochreous; antennæ black.

Expanse, ♂ $1\frac{4}{8}$, ♀ $1\frac{5}{8}$ inch.

" Colombo and Newera Eliya. Plains and up to 6000 feet; in gardens. Common. Comes into the house at night, attracted by the light." (*Hutchison.*)

CREATONOTUS CONTINUATUS (Plate 108, Fig. 4).

Creatonotus continuatus, Moore, Annals of Nat. Hist. 1877, p. 344.

Male and female. Upperside: forewing ochreous, with an unbroken black streak extending from base below the cell to near the apex, a black streak within the cell and between all the upper veins, a shorter streak also from posterior angle: hindwing in male fuliginous, with darker maculated border, in female pale ochreous, with suffused blackish discal streaks, a cell spot, and darker black marginal spots; a

broad black streak along thorax and short dorsal bands. Body ochreous-red above, brownish-black beneath. Legs brownish-black; fore and middle femora above ochreous. Underside of wings as above.

Expanse $1\frac{5}{8}$ inch.

CREATONOTUS EMITTENS (Plate 108, Fig. 3, 3*a*, ♂ ♀).

Creatonotus emittens, Walker, Catal. Lep. Het. Brit. Mus. iii. p. 638 (1855); Moore, Catal. Lep. Mus. E. I. C. ii. p. 363.

Forewing pale pinkish-ochreous, with a slight crimson tinge along the costal border; a brown longitudinal streak below the cell, divided by the first and second median veins, and followed by a more slender streak above the upper median vein: hindwing ochreous-white, with a brown discal dot. Thorax ochreous; abdomen above crimson, beneath ochreous-white, with black dorsal and lateral spots; fore and middle femora crimson above; tarsi brownish; antennæ black, base of shaft white.

Expause, ♂ $1\frac{2}{8}$, ♀ $1\frac{3}{8}$ inch.

Genus ALOA.

Aloa, Walker, Catal. Lep. Het. Brit. Mus. iii. p. 699 (1855).

Forewing long, narrow, apex pointed; cell long, extending to two-thirds the length; first subcostal emitted at one-sixth before end of the cell, second quadrifid, the third thrown off at one-fifth from below base of the second, and fifth at one-half from the third; discocellular deeply concave, bent close to subcostal, radial from the angle; two upper medians from angles at end of the cell, second from close to the end, first or lower at one-third before the end; submedian recurved downward from the base: hindwing short, triangular; cell extending two-thirds the wing; costal vein joined to subcostal to nearly half length of the cell; two subcostal branches from end of the cell; discocellular concave; three upper median branches from angles at end of the cell, first or lower at nearly one-half before end of the cell; submedian and internal vein nearly straight. Body stout, abdomen extending beyond hindwing; head small; palpi porrect, extending beyond the head, pilose beneath, third joint conical, squamous; antennæ short, thick, coarsely biserrated in male; legs thickish, squamous.

Type, *A. Lactinea.*

ALOA SANGUINOLENTA (Plate 108, Fig. 6, 6*a*, ♂ ♀).

Bombyx sanguinolenta, Fabricius, Ent. Syst. iii. i. p. 473 (1793); Donovan, Ins. of India, pl. 53, ♀.

Wings pure white. Male: forewing with a crimson costal band extending to the apex; a small black spot at upper end of the cell, a dot at base of the two upper

median veins, and two small spots on the submedian, one being near the base, the other towards the end: hindwing with a larger black spot at end of the cell, and four spots at equal distances apart on posterior margin, the subanal and apical spot smallest and sometimes obsolete. Female: forewing with the black spots less prominent: hindwing with larger black spots. Thorax pure white; a band in front of the thorax and the vertex crimson; a black central dot on each tegula; abdomen above deep ochreous-yellow, with black dorsal and lateral bands; abdomen beneath white; legs white; fore and middle femora crimson above, apex of femora and a streak down front of fore and middle tibiæ and bands on all the tarsi black; antennæ black.

Expanse 2 to $2\frac{1}{4}$ inches.

"Colombo. Plains; in cultivated ground. August." (*Hutchison.*)

Genus AREAS.

Areas, Walker, Catal. Lep. Het. Brit. Mus. iii. p. 658 (1855).

Forewing long, narrow; costa arched, apex acute, exterior margin very oblique, posterior angle convex; cell extending to three-fifths the wing; costal vein extending to two-thirds the wing; first subcostal emitted at one-fourth before end of the cell, second from end of the cell, quadrifid, the third from below second near its base, and the fifth at one-half from the base of third; discocellular bent acutely in the middle, radial from upper end of the cell; two upper medians from angles at end of the cell, second from close before the end, first or lower at one-half before the end; submedian curved downward from the base: hindwing elongated, narrow, apex produced, exterior margin very oblique and convex towards the anal angle; abdominal margin short; costal vein straight, extending to the apex; subcostal touching the costal for a short distance beyond the base; two subcostal branches from end of the cell; discocellular bent below the middle; two upper medians from angles at end of the cell, second from near the end, first or lower at one-half before end of the cell; submedian and internal vein slightly recurved. Body large, very robust; palpi long, porrect, compactly squamose, first joint long, longer than the second, third joint conical; legs smooth, short, thick; antennæ bipectinated in male, the pectinations short and thick, serrated in female.

Type, *A. orientalis.*

AREAS MELANOPSIS (Plate 108, Fig. 2).

Arctia melanopsis, Walker, Catal. Lep. Het. B. M. xxxi. p. 280 (1864).
Aloa callisoma, Felder, Reise Novara, Lep. iv. pl. 101, fig. 4 ♀ (1868-74).

Forewing pale brownish-ochreous, crossed by a medial inwardly-oblique narrow grey-black fascia: hindwing brighter brownish-ochreous, suffused with crimson

along abdominal margin. Thorax brownish-ochreous, a black spot on each tegula; abdomen crimson, with a dorsal and two lateral rows of black spots; abdomen beneath whitish-ochreous; front of head and palpi black; legs pale brownish-ochreous beneath, crimson above and tipt with black, tibiæ and tarsi black; antennæ black.

Expanse 2 to $2\frac{1}{4}$ inches.

Genus RHODOGASTRIA.

Rhodogastria, Hübner, Verz. bek. Schmett. p. 172 (1818-25).
Amerila, Walker, Catal. Lep. Het. B. M. iii. p. 725 (1855).
Pelochyta (part), Hübner.

Forewing elongated, triangular, mostly semitransparent: first subcostal emitted at one-fourth before end of the cell, second from close to the end, trifid, the third being thrown off from below at about one-third above its base, and the fourth from the third near the apex; fifth from end of the cell, curving upward and touching the third near its base; discocellular inwardly oblique, bent near upper end, radial from the angle; two upper medians from angles in a line with the discocellular above end of the cell, second median from end of the cell, first or lower at nearly one-half before the end; submedian recurved: hindwing short, triangular, semitransparent; costal vein extending to apex; subcostal joined to costal from near its base to one-third before end of the cell, two subcostal branches from end of the cell; discocellular slightly concave; cell extending nearly three-fourths the wing; two upper medians from angles at end of the cell, second from near the end, first or lower at nearly one-half before the end; submedian and internal vein slightly curved. Body robust, squamous; palpi porrect, first joint short, slightly pilose, second and third joints squamous, second extending half beyond the vertex, third joint short, thick; antennæ slender, ciliated; legs long, squamous.

RHODOGASTRIA ASTRÆA (Plate 108, Fig. 1, ♂, 1*a*, larva).

Sphinx astreas, Drury, Ins. ii. pl. 28, fig. 4 (1773).
Amerila astræa, Moore, P. Z. S. 1867, p. 682.
Phalæna melanthus, Cramer, Pap. Exot. iii. pl. 286, fig. B (1782).
Rhodogastria melanthus, Hübner, Verz. bek. Schmett. p. 172.
Amerila melanthus, Walker, Catal. Lep. Het. B. M. iii. p. 727 (1855).

Wings pale ochreous-brown: forewing with the cell and large interspace between the veins from the subcostal to submedian vein semitransparent; a broad discocellular streak, the apical border and exterior margin darker brown: hindwing with the cell and discal area semitransparent; head and thorax pale ochreous, black spotted; abdomen above dark crimson, with two lateral rows of black spots; abdomen beneath pale ochreous; palpi crimson, with black bands; antennæ crimson; legs

crimson above, femora pale ochreous beneath, fore and middle tibiæ and tarsi brown streaked above.

Expanse $2\frac{1}{2}$ inches.

Larva green, slightly hairy, with a subdorsal and lateral row of small black spots; spiracles brown; head yellow. Pupa purple-brown.

"Feeds on Beaumontia." (*Thwaites.*)

Genus CYCNIA?

Cycnia sparsigutta, Walker, Catal. Lep. Het. B. M. xxxi. p. 296 (1864).

"Male and female. Pale luteous. Wings slightly and minutely speckled with brown, more speckled beneath; a discal point, which is black in the forewings, brown in the hindwings, brown and larger on the underside. Forewings with a very oblique submarginal row of brown dots, which are composed of speckles. Hindwings paler. Length of the wings 13—22 lines. Ceylon. In Mr. E. L. Layard's Collection."

Not having seen the specimens above described by Mr. Walker as *Cycnia sparsigutta*, we are unable, from his description, to determine the genus to which it belongs.

Family LIPARIDÆ.

Wings mostly broad in the male, longer in the female, or in some genera only rudimentary in the female. Body of male slender, in female large, and generally with an anal tuft; antennæ bipectinated; forelegs very hairy.

Larva hairy, mostly arranged in tufts or fascicles, some of which are short, dense, disposed along the back and limited to certain segments, while others are more lengthened and project anteriorly and posteriorly; in some genera these fascicles are replaced by short hairs arising from separate tubercles.

Cocoon soft, of a slight silken and hairy texture.

Genus ORGYIA.

Orgyia, Ochs. Schmett. Eur. iii. p. 208 (1810).
Notolophus, Germar, Prod. ii. p. 35 (1812).
Gynæphora, Hübner, Verz. bek. Schmett. p. 161 (1818-25).

Male: forewing short, broad, triangular; first subcostal emitted at one-half before end of the cell, second at one-fifth, trifid, fifth from end of the cell, ascending upward and touching third near its base; discocellular concave, radial from end of the cell in a line with subcostal; cell wide, extending to more than half the wing; two upper median branches from angles above end of the cell, second branch at a short distance before the end, first or lower at one-third before end of the cell; submedian widely separated from the median, curved downward from its base:

hindwing short, broadly triangular, exterior margin convex; costal vein extending to apex; subcostal curved upward and slightly touching the costal near its base, two subcostal branches on a footstalk half beyond end of the cell; discocellular very slender, bent inward before the middle; upper median from angle above end of the cell, two middle medians from angles at end of the cell, first or lower at one-third before the end; submedian and internal vein straight. Thorax broad, pilose; abdomen slender; palpi stout, very hairy, projecting much beyond the head; legs short, pilose, hind tibiæ with two apical spurs; antennæ broadly bipectinated. Female: wings rudimentary; antennæ crenulated. Body very large.

ORGYIA POSTICA (Plate 109, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Lacida postica, Walker, Catal. Lep. Het. B. M. iv. p. 803 (1855), ♂.

Male: forewing rufous-brown; with an indistinct subbasal, an antemedial, and a postmedial transverse zigzag black line, and three short longitudinal subapical streaks; medial area more or less powdered with white scales; a white lunate inner-bordered black-speckled reniform spot at end of the cell; a submarginal pale-brown zigzag line powdered with white scales: hindwing dull fuliginous-brown. Body, palpi, and legs rufous-brown; antennæ fuliginous-brown. Female: wings rudimentary; pale greyish-brown; abdomen greyish-brown, anal tuft brownish.

Expanse, ♂ 1 inch.

Larva yellowish, with a dorsal and two lateral purple-brown bands; head red; sparsely covered with short purple-brown hairs; two long tufts of purple-brown hairs projected over the head and two over anal segment; two lateral tufts of whitish hair from fifth and sixth segment, and a dorsal tuft of short yellow hairs on fifth to eighth segments; spiracles brown. Pupa hairy; male purplish-olive, female olivaceous.

"Feeds on *Cæsalpinia*." (*Thwaites.*)

ORGYIA CEYLONICA.

Orgyia ceylonica, Nietner, Obs. on the Enemies of the Coffee-tree in Ceylon, p. 19 (1861).

"Male: brown, variegated with a little black and white. Female with rudimentary, whitish scale-like wings, dirty yellowish, covered with fine black hair, rather thickly towards the extremity of the abdomen and sides.

Expanse, ♂ $\frac{3}{4}$, ♀ $\frac{5}{8}$ inch long.

Larva $1\frac{1}{2}$ inch long, brown, underside and head reddish, covered with yellowish hair, two long slender tufts of dark hair on each side of the head, like horns, and another behind like a tail; four short stiff white tufts upon the anterior part of the back, and two similar ones on each side. Spins a thin cocoon, in which the chrysalis rests for two weeks. Not uncommon from October to December."

ORGYIA VIRIDESCENS.

Acyphas viridescens, Walker, Catal. Lep. Het. B. M. iv. p. 798 (1855), ♂.

Male: forewing of a redder-brown colour than *O. postica*, the basal black cross mark prominent, the antemedial transverse sinuous line very distinct and with a pale green-grey inner lower streak, postmedial sinuous black line also more prominent, the intermedial area between the two sinuous lines greenish-grey, the discocellular streak whiter and less lunular in shape: hindwing paler than in *O. postica.*

Expanse $1\frac{1}{8}$ inch.

Genus ENOME.

Enome, Walker, Catal. Lep. Het. Brit. Mus. pt. iv. p. 883 (1855).

Male: forewing short, triangular; costal vein recurved, extending to two-thirds the wing; first subcostal emitted at one-eighth before end of the cell, ascending and slightly touching the costal above end of the cell, second from end of the cell, quadrifid, the fifth starting from below third at a short distance beyond its end; cell broad at its end, extending to half the wing; discocellular deeply concave; two upper median branches from angles above end of the cell, second from close to the end, first or lower at nearly one-half before the end; submedian slightly curving downward from the base: hindwing short, broadly produced hindward, exterior margin convex; costal vein arched at the base, extending to apex; subcostal curved upward and touching the costal near the base, first subcostal emitted from immediately before end of the cell; discocellular bent acutely before the middle; two upper medians from angles at end of the cell, second at a short distance before the end, and first or lower at one-fifth before the end; submedian and internal vein straight. Thorax broad, pilose; abdomen slender; palpi small, short, pilose, not extending beyond the head; antennæ broadly bipectinated; legs pilose, hind tibiæ with two apical spurs. Female: wings rudimentary; body large, woolly; antennæ minutely serrated, shaft hairy.

ENOME AMPLA (Plate 109, Fig. 2, *2a*, ♂ ♀, *2b*, larva).

Enome ampla, Walker, Catal. Lep. Het. B. M. iv. p. 883 (1855), ♂; Moore, Catal. Lep. Mus. E. I. C. ii. p. 346, pl. 9*a*, f. 4, ♂; pl. 15, fig. 7, 7*a*, larva.

Male: dark brown: forewing with some pale ochreous-brown bordered blackish basal spots, a transverse antemedial and a postmedial zigzag band, the latter acutely pointed at the angles; a blackish medial transverse fascia interrupted by a blacker lunate mark at end of the cell, and a contiguous inner black spot; cilia spotted with pale ochreous-brown: hindwing brighter brown, with a very indistinct darker brown submarginal lunular line and a more distinct marginal line; cilia alternated with pale ochreous-brown. Body and antennæ blackish-brown. Female: dark brown; thorax, head, and rudimentary wings woolly-white, with dark brown spots.

Expanse, ♂ $1\frac{1}{2}$ to $1\frac{3}{4}$ inch.

Larva brown, covered with short brown hairs, those from anterior and anal segment long; male with a pale subdorsal line and lower spots, some white spots along the back and below the pale line; female with blackish dorsal spots and a white lateral spot on the tenth segment; legs reddish. Pupa purplish-brown, slightly tufted with short hairs.

"Larva almost omnivorous." (*Thwaites.*)

Genus ANTIPHA.

Lacida,* Walker, Catal. Lep. Het. B. M. iv. p. 801 (1855).
Antipha, Walker, *id.* p. 806 (1855).

Male: forewing short, narrowly triangular; first subcostal emitted at one-fifth before end of the cell, second quadrifid, fifth from below third at one-third from its base; discocellular concave, radial from end of the cell in a line with the subcostal; three upper median branches from angles at end of the cell, first or lower at one-third before the end; submedian extending close to the posterior margin: hindwing triangular, exterior margin convex; costal vein recurved, extending to apex; subcostal curved upward and touching costal near its base, two subcostal branches on a footstalk one-third beyond the cell; discocellular bent inward, lower end long and oblique; upper median from angle above end of the cell, two middle medians on a footstalk one-third beyond end of the cell, first or lower at one-third before end of the cell; submedian and internal vein straight. Body slender; thorax pilose, tegulæ with spatular hairs; palpi long, projecting beyond the head, second joint pilose beneath, third joint slender; antennæ broadly bipectinated; legs roughly squamose, hind tibiæ with four spurs. Female: wing somewhat longer; abdomen stout; antennæ finely pectinated.

Type, *A. antica.*

ANTIPHA ANTICA (Plate 110, Fig. 3, ♂).

Lacida antica, Walker, Catal. Lep. Het. B. M. iv. p. 802 (1855), ♂.
Anaxila notata, Walker, *id.* iv. p. 919 (1855), ♀.

Male: pale brown: forewing with the basal and discal area speckled with dark brown; a subbasal transverse waved dark brown line and an oblique upper discal broad fascia, the latter bordered externally by an indistinct brown zigzag line; a dark brown circular mark at end of the cell; a submarginal series of black dentate spots. Female paler; forewing less brown speckled, the oblique discal brown fascia broader and more distinct, the mark at end of the cell more distinct and tripartite, the submarginal dentate spots less distinct. Thorax, head and palpi, and legs above speckled with dark brown.

Expanse, ♂ $1\frac{2}{8}$, ♀ $1\frac{3}{8}$ inch.

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* *Lacides* has previously been used for a genus of moths by Walker (see Lep. of Ceylon, ii. p. 53).

ANTIPHA COSTALIS (Plate 110, Fig. 2, 2*a*, ♂ ♀, 2*b*, larva).

Antipha costalis, Walker, Catal. Lep. Het. B. M. iv. p. 806 (1855), ♂.
Lacida complens, Walker, *id.* xxxii. p. 336 (1865), ♂.
Rilia illepida, Walker, *id.* p. 436, ♀.

Male. Smaller than *A. antica*: forewing with a dark brown basal blotched and darker blotched-brown oblique upper discal fascia, the exterior border and posterior angle paler, the marginal dentate speckled spots less defined. Female somewhat paler, with the submarginal spots more distinct.

Expanse, ♂ $\frac{11}{12}$, ♀ $1\frac{1}{12}$ inch.

Larva blackish-brown, thickest in middle; tufted with short hairs; a transverse narrow pale pink line dividing sixth and seventh segments. Cocoon pale brown, purse-shaped, with short hairs exserted from surface. Pupa purplish-brown, head and wing-cases darkest.

ANTIPHA STRIGULIFERA.

Lacida strigulifera, Walker, Catal. Lep. Het. B. M. xxxii. p. 336 (1865).

"Male. Fawn colour: forewings with the basal, interior and exterior lines black, slender, pale-bordered; interior line nearly straight, exterior line denticulated, much bent; submarginal line pale, almost obsolete, traversed near the costa by some little black streaks; marginal lunules black, much curved, with pale borders; reniform mark subquadrate, with an incomplete brown border, which is included in a pale one: hindwings whitish, with a slight testaceous tinge. Abdomen whitish. Antennæ deeply pectinated. Length twelve lines."

"Ceylon. In Mr. E. L. Layard's collection."

ANTIPHA PROMITTENS.

Lacida promittens, Walker, Catal. Lep. Het. B. M. xxxii. p. 337 (1865).

"Male. Brown: forewings fawn-colour, brown at the base; basal, interior and exterior lines irregular, incomplete, composed of black flecks; the last one bent; submarginal line pale, denticulated, indistinct; marginal dots blackish-brown, elongated: hindwing cinereous above, beneath with a pale brown discal spot and an interrupted pale brown submarginal band. Abdomen cinereous. Underside cinereous. Antennæ much longer and more broadly pectinated than in L. strigulifera."

"Ceylon. In Mr. Layard's collection."

Genus CHARNIDAS.

Charnidas, Walker, Catal. Lep. Het. B. M. iv. p. 797 (1855).
Repena, Walker, *id.* p. 800 (1855).
Lacida (part), Walker, *id.* p. 801.

Male: forewing elongated, triangular; first subcostal emitted at one-half before end of the cell, second at one-fourth, trifid, fifth from end of the cell, curving upward

and touching the third beyond end of the cell; discocellular bent outward near upper end, radial from the angle; upper median from angle above end of the cell, second at a short distance before the end, first or lower at one-third before the end; submedian widely separated from the median: hindwing short, triangular, exterior margin slightly convex; costal vein recurved, extending to apex; subcostal very slender, slightly touching the costal at one-third from the base, two subcostal branches from immediately beyond end of the cell; discocellular bent inward near the middle; upper median from angle above end of the cell, two middle medians from angles at the end, first or lower at one-half before the end; submedian and internal vein straight. Body slender, thorax and head pilose; palpi long, projecting much beyond the head, second joint stoutly pilose beneath, third joint somewhat long and fusiform; antennæ broadly bipectinated; legs slightly pilose, hind tibiæ with four spurs. Female. Wings slightly more elongated; abdomen stout; antennæ finely bipectinated.

Type, *C. litura.*

CHARNIDAS ROTUNDATA (Plate 110, Fig. 4, 4*a*, ♂ ♀).

Lacida rotundata, Walker, Catal. Lep. Het. B. M. iv. p. 802 (1855), ♂.
Cycnia rubida, Walker, *id.* xxxi. p. 297 (1864), ♀.
Lymantria disjuncta, Walker, *id.* xxxii. p. 366 (1865), ♂.

Male and female. Pale dull reddish-ferruginous: forewing with an indistinct blackish speckled lunular streak at end of the cell, and a small spot beneath it at base of middle median veins. Female somewhat brighter coloured: forewing very sparsely covered with minute black scales; lunular black streak at end of the cell as in male.

Expanse, ♂ $1\frac{3}{8}$, ♀ $1\frac{5}{8}$ inch.

CHARNIDAS PLANA (Plate 110, Fig. 1, 1*a*, ♂ ♀).

Orgyia plana, Walker, Catal. Lep. Het. B. M. iv. p. 786 (1855), ♂.
? *Charnidas junctifera*, Walker, *id.* xxxii. p. 334 (1865), ♂.

Male. Greyish umber-brown: forewing with an indistinct blackish-brown pale-bordered spot at end of the cell, and a submarginal row of very indistinct dentate spots: hindwing with the costal and abdominal border darker brown; a very indistinct blackish-brown spot at end of the cell; cilia alternated with blackish-brown. Female pale ochreous-brown, minutely black-speckled: forewing with the black-speckled cell spot and submarginal row of spots more distinct, the black speckles also clustered beyond and below the cell: hindwing with a more distinct black cell spot.

Expanse $1\frac{2}{10}$ inch.

" Colombo. In the cinnamon garden." (*Hutchison.*)

CHARNIDAS SUBNOTATA.

Lacida subnotata, Walker, Lep. Het. Brit. Mus. iv. p. 803 (1855), ♂.

Male. Smaller than *C. plana*: forewing darker and of a more rufous-brown colour; with similar but more distinct markings: hindwing almost black-brown, with a very slender pale longitudinal medial streak.

Expanse 1 inch.

Genus LÆLIA.

Lœlia, Stephens, Illust. Brit. Ent. Haust. ii. p. 62 (1828).
Procodeca, Walker, Catal. Lep. Het. B. M. iv. p. 812 (1855).
Ricine, Walker, *id.* iv. p. 824 (1855).

Male: forewing slightly elongated; first subcostal vein emitted at one-half before end of the cell; second at one-eighth, trifid; fifth from end of the cell, ascending and touching third above its base; discocellular bent outward near upper end, radial from the angle; two upper medians from angles at end of the cell, second at one-eighth, and first or lower at one-third before end of the cell; submedian recurved: hindwing short, exterior margin convex; costal vein recurved, extending to apex; subcostal slightly touching costal at one-third beyond its base, two subcostal branches on a footstalk one-fourth beyond the cell; discocellular bent inward; upper median from angle above end of the cell, two middle medians from angles at the end, and first or lower median at more than one-third before the end; submedian and internal vein straight. Body slender; thorax pilose; palpi densely pilose, projecting much beyond the head, apex conical; antennæ bipectinated; legs pilose, hind tibiæ with four spurs. Female. Wings longer; body stout; antennæ minutely bipectinated.

LÆLIA ANGULIFERA (Plate 110, Fig. 5, 5*a*, ♂ ♀).

Procodeca angulifera, Walker, Catal. Lep. Het. B. M. iv. p. 919 (1855), ♂.
Ricine suffusa, Walker, *id.* iv. p. 825, ♀.

Male. Very pale brownish-ochreous: forewing darkest coloured along the costal border and below the cell; with a discal angular series of six small black spots: hindwing ochreous-white towards the base. Body and legs brownish-ochreous. Female pale whitish-ochreous: forewing slightly pale yellowish along the borders: hindwing white. Front of head and legs ochreous-yellow.

Expanse, ♂ $1\frac{2}{10}$, ♀ $1\frac{4}{10}$ inch.

Genus LÆLIOIDES.

Wings comparatively shorter and more triangular in form than in Lælia: forewing narrow; cell extending three-fifths the wings; first subcostal emitted at nearly

one-half before end of the cell, second at one-ninth before the end, trifid; fifth from end of the cell, curved upward and joined to third for a short distance; discocellular bent near upper end, concave in the middle, radial from upper angle; three upper medians from angles at end of the cell, lower at one-fourth before the end; submedian curved downward: hindwing short, narrow; cell extending more than half the wing; two subcostal branches on a footstalk nearly one-half beyond the cell; discocellular bent in the middle; upper median from angle above end of the cell, two middle medians from angles at the end, first or lower at nearly one-half before end of the cell; submedian and internal vein straight. Body moderate, extending beyond the hindwing; palpi porrect, laxly pilose beneath, second joint extending beyond the head, third joint short, conical; antennæ bipectinated; legs pilose.

LÆLIOIDES FASCIATA (Plate 110, Fig. 6, ♀).

Female: forewing pale red, sparsely irrorated with brown scales; a longitudinal brown fascia extending from base below the cell to middle of the disc, beyond which is a discal curved series of five minute black-speckled spots: hindwing reddish-white. Thorax, head, palpi, antennæ, and legs pale red; abdomen whitish at the base, reddish at apex.

Expanse, ♀ $1\frac{1}{2}$ inch.

Genus ARTAXA.

Artaxa, Walker, Catal. Lep. Het. B. M. iv. p. 794 (1855).
Arna, Walker, *id.* v. p. 1177 (1855).

Male: forewing rather short, triangular; first subcostal emitted at one-fifth before end of the cell, second from end of the cell, quadrifid; discocellular very obliquely concave, radial from upper end of cell; three upper medians from angles at end of the cell, first or lower at one-third before the end; submedian slightly recurved; the posterior margin fringed with long spatulate hairy scales: hindwing short, exterior margin convex; costal vein recurved, extending to apex; subcostal curved upward and touching the costal at half length of the cell, two subcostal branches on a footstalk at one-fourth beyond the cell; discocellular outwardly oblique; four median branches, the upper branch from angle above end of the cell, two middle branches from end of the cell, lower at one-third before the end; submedian and internal vein straight. Body moderate, tufted at anal end; palpi projecting beyond the head, slender, laxly squamose, apical joint short, conical; antennæ bipectinated; legs and tarsi slightly pilose, hind tibiæ with four spurs. Female. Wings longer; body stout, tufted; antennæ minutely pectinated.

Type, *A. digramma.*

ARTAXA DIGRAMMA (Plate 112, Fig. 1, 1*a*, ♂ ♀).

Bombyx digramma, Boisduval, Icones Reg. Anim. Ins. pl. 86, fig. 4 (1829-38).
Artaxa digramma, Moore, Catal. Lep. Mus. E. I. C. ii. p. 350, pl. 16, fig. 5, 5*a*.
Artaxa guttata, Walker, Catal. Lep. Het. B. M. iv. p. 795 (1855), ♂.

Male and female. Yellow: forewing crossed by an antemedial and a postmedia pale waved line, the intermediate area somewhat ochreous-yellow; two small black subapical spots: hindwing pale yellow.

Expanse, ♂ 1, ♀ 1½ inch.

ARTAXA FRATERNA.

Dark yellow. Male: forewing with the basal and discal area more or less ochreous-yellow and speckled with brown scales; crossed by an indistinct antemedial and a postmedial oblique waved pale line; a pale circular mark at end of the cell; two small black subapical spots and a spot at posterior angle, the latter sometimes being broken in two: hindwing paler yellow. Female: forewing more uniformly coloured; crossed by the indistinct pale lines; the black spots as in male. Body dark yellow; tuft in male pale yellow, darker in female.

Expanse, ♂ ⅞, ♀ 1⅜ inch.

ARTAXA APICALIS (Plate 111, Fig. 4, 4*a*, ♂ ♀, 4*b*, larva).

Arna apicalis, Walker, Catal. Lep. Het. B. M. v. p. 1177 (1855), ♂.

Male and female. Dark brown: forewing with the costal border, apex, and a triangular space above the posterior angle ochreous-yellow, the inner area of the wing being dark brown irrorated with blackish scales; two black spots before the apex; the cilia at apex and posterior angle yellow: hindwing paler brown; cilia ochreous-yellow. Body brown; front of thorax, head, palpi, antennæ and legs, and abdominal tuft ochreous-yellow.

Expanse, ♂ ⅝, ♀ 1⅜ inch.

Larva slender, very sparsely covered with delicate hairs; colour olivaceous-green, with a broad dorsal reddish band traversed by a thin dorsal black line; a black dorsal tubercle on fifth and sixth segment, and one on twelfth segment; head reddish. Cocoon reddish-olivaceous. Pupa olivaceous-red.

"Feeds on Terminalia." (*Thwaites.*)

ARTAXA CITRINA (Plate 112, Fig. 2, 2*a*, ♂ ♀).

Artaxa citrina, Moore, Annals of Nat. Hist. 1877, p. 344.

Male and female: pale yellow; forewing in male brighter yellow, and with a short oblique series of blackish-speckled spots from middle of hind margin to beneath

end of the cell. Abdomen bright yellow, tuft paler. Female uniform pale yellow, without markings. Underside: costal border bright yellow.

Expanse, ♂ $\frac{5}{8}$, ♀ $1\frac{1}{8}$ inch.

ARTAXA CERVINA (Plate 112, Fig. 3, ♂).

Artaxa cervina, Moore, Annals of Nat. Hist. 1877, p. 345.

Male: forewing brownish-ochreous, with two transverse medial pale yellowish slightly wavy lines: hindwing pale brownish fawn colour. Body brownish-ochreous. Underside dark brownish fawn colour, outer borders yellowish. Legs brownish above.

Expanse $\frac{6}{8}$ to $\frac{7}{8}$ inch.

Nearest allied to *A. varians* (Walker), but is a much smaller insect, and of different coloured wings.

ARTAXA PUSILLA (Plate 112, Fig. 4, ♂).

Euproctis pygmæa,* Moore, Desc. Lep. Coll. Atkinson, Asiatic Soc. Bengal, p. 48 (1879).

Male. Yellow: forewing with two medial transverse scarcely perceptible paler bands: hindwing pale yellow. Underside: forewing tinged with brownish fawn colour.

Expanse $\frac{7}{10}$ inch.

Genus SOMENA.

Somena, Walker, Catal. Lep. Het. B. M. vii. p. 1734 (1856).
Orvasca, Walker, *id.* xxxii. p. 502 (1865).

Wings comparatively longer than in Artaxa: forewing with two upper medians from angles at end of the cell, second at a short distance before the end, first or lower at one-third before the end; posterior margin fringed with long spatulate hairy scales: hindwing with two subcostal branches on a footstalk half beyond the cell; discocellular very oblique; three median branches, the two upper branches from angle at end of the cell, first or lower at one-fourth before the end.

Type, *S. scintillans*.

SOMENA SCINTILLANS (Plate 111, Fig. 3, ♀, 3*a*, larva).

Somena scintillans, Walker, Catal. Lep. Het. B. M. vii. p. 1734 (1856), ♂.
Artaxa scintillans, Butler, Types Lep. Het. B. M. v. p. 52, pl. 90, fig. 1 (1880).

Forewing ochreous-brown, irrorated with dark brown raised scales; in some specimens an indistinct transverse antemedial and a postmedial narrow waved pale line is apparent; a yellow spot at the apex; one on middle of the exterior margin, and another at posterior angle, the brown border of the spots showing a few minute silvery scales; cilia bordering the spots also yellow: hindwing yellow. Thorax and

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* This name has been previously used for an allied African species of this genus.

middle of abdomen ochreous-brown, front of thorax, head, palpi, antennæ, legs, and abdominal tuft yellow.

Expanse, ♂ 1, ♀ $1\frac{1}{4}$ inch.

Larva sparsely covered with fine hairs, those on the anterior and anal segment projected forward; a dorsal red line bordered by a subdorsal yellow band, below which is a yellow lateral band; a dorsal white-speckled tubercle on fifth and sixth segment, and two lateral rows of smaller similar tubercles above the yellow band. Cocoon fusiform, pale purplish-brown. Pupa pale olivaceous-red, naked.

"Feeds on Gynurus, &c." (*Thwaites.*)

SOMENA SUBNOTATA (Plate 111, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Orvasca subnotata, Walker, Catal. Lep. Het. B. M. xxxii. p. 502 (1865), ♂.

Closely allied to *S. scintillans*. Differs in the forewing being comparatively more sparsely irrorated with dark brown scales, and in the three marginal yellow spots being smaller and narrower.

Expanse, ♂ $\frac{5}{8}$, ♀ 1 to $1\frac{1}{8}$ inch.

Larva covered with fine hairs, which project over the head and anal segment; a red-speckled dorsal tubercle on fifth, sixth, and twelfth segments; a dorsal yellow lunular band from seventh segment, and a lateral white band from fourth segment, the latter with red spots; head reddish; above the lateral line is a row of indistinct red-speckled tubercles. Cocoon purse-shaped, pale olivaceous-brown. Pupa pale ochreous-brown, hairy.

"Feeds on *Cycas circinalis*, &c." (*Thwaites.*)

SOMENA IRRORATA (Plate 111, Fig. 2, ♂).

Male. Allied to *S. subnotata*: forewing darker ochreous-brown, and more densely irrorated with black scales, the lobate outer border being most sharply defined and thickly speckled with silvery scales, the lobate portions of the border not extending to the extreme margin of the wing, as in *S. subnotata* and *S. scintillans*, the extreme border and the cilia, as well as the costal edge, being bright yellow: hindwing bright yellow.

Expanse $\frac{6}{8}$ inch.

Genus BEMBINA.

Bembina, Walker, Catal. Lep. Het. B. M. xxxii. p. 505 (1865).

Female: forewing elongated, triangular, costa arched; first subcostal vein emitted at one-sixth before end of the cell, second from end of the cell, trifid; radial from end of the cell; discocellular extremely concave; cell broad, extending more than half length of the wing; upper median from angle above end of the cell, two

middle medians from contiguous angles at the end, and first or lower median at one-third before end of the cell; submedian slightly recurved: hindwing short, exterior margin very convex; two subcostal branches on a footstalk nearly one-half beyond the cell; upper end of cell short, lower end extending to nearly half the wing; discocellular obliquely concave, bent near lower end, radial from the angle; two median branches from end of the cell, first or lower at nearly one-half before the end. Body stout, abdomen thick, densely tufted at apex; palpi long, slender, first and second joints laxly pilose, third joint smooth; antennæ bipectinated to tip; legs laxly pilose beneath.

BEMBINA APICALIS (Plate 111, Fig. 5, ♀).

Bembina apicalis, Walker, Catal. Lep. Het. B. M. xxxii. p. 505 (1865), ♀.

Female. Reddish-ochreous: forewing with an oblique antemedial and a post-medial narrow zigzag band of brown scales, the latter band outwardly bordered by a similar partly-confluent band, the band being dilated at the costal end and in the middle; a submarginal row of black-scaled spots; cilia brown: hindwing paler. Abdomen reddish-ochreous, anal tuft yellow; thorax, head, and palpi greyish-ochreous; legs reddish-ochreous.

Expanse, ♀ $1\frac{3}{8}$ inch.

Genus PORTHESIA.

Porthesia, Stephens, Illust. Brit. Ent. Haust. ii. p. 65 (1828).
Arctornis (part), Germar, Prod. p. 18 (1812).

Male: forewing short, triangular; first subcostal branch emitted immediately before end of the cell, second from the end, quadrifid, the fifth thrown off from second at nearly one-half from its base; discocellular concave, radial from upper end of the cell; two upper median branches from an angle at end of the cell, second from angle immediately before the end, first or lower at nearly one-half before the end; submedian straight: hindwing short, broad, exterior margin very convex; costal vein arched at the base, extending to apex; subcostal touching the costal at one-half length of the cell, two subcostal branches on a footstalk one-third beyond end of the cell; discocellular obliquely concave; cell short, broad; median with three branches, two upper branches from angle at end of the cell, first or lower at one-fourth before the end; submedian and internal vein straight. Body moderate, tufted at anal end; thorax and head pilose; palpi small, slender, compactly pilose, projecting beyond the head; antennæ bipectinated; legs and tarsi densely pilose, hind tibiæ with four spurs. Female. Wings slightly longer; abdomen stout, densely tufted at anal end; antennæ minutely bipectinated.

Type, *P. auriflua*, Fabr.

Remark.—This genus (as pointed out by Mr. Butler) differs from typical

Euproctis in the forewing being more regularly triangular, the costa more arched, the two upper median veins emitted together at end of the cell. The hindwing is also shorter and broader, and has only three median branches (Euproctis always having four). The body is stouter, and the thorax more laxly pilose.

PORTHESIA SUBDITA (Plate 112, Fig. 5, *5a*, ♂ ♀).

Euproctis subdita, Moore, Proc. Zool. Soc. 1879, p. 400.

Male. Upperside white: hindwing with the costal border and apex thickly irrorated with dusky-brown scales. Underside: forewing with the costal border dusky-black: hindwing with the costal border narrowly speckled with dusky-brown. Body and legs white; anal tuft bright yellow; antennæ dusky-brown, shaft white. Female white above and beneath.

Expanse, ♂ 1, ♀ $1\frac{2}{10}$ inch.

Genus EUPROCTIS.

Euproctis, Hübner, Verz. bek. Schmett. p. 159 (1818-25).
Arctornis (part), Germar.
Porthesia (part), Stephens.

Male: forewing slightly elongated, triangular; first subcostal emitted from immediately before end of the cell, second from the end, quadrifid, the fifth from below second at nearly one-half from its base; discocellular concave; radial from upper end of the cell; three upper medians from equidistant angles at end of the cell, first or lower at nearly one-half before the end; submedian straight: hindwing short, exterior margin obliquely convex; costal vein arched at the base, extending to apex; subcostal arched in middle of the cell and slightly touching the costal, two subcostal branches on a footstalk one-third beyond end of the cell; discocellular bent inward near the middle; upper median from angle above end of the cell, two middle medians on a footstalk beyond the cell, first or lower at one-third before end of the cell; submedian and internal vein recurved. Thorax stout, abdomen tufted at anal end; thorax and head densely and laxly pilose; legs and tarsi laxly pilose, hind tibiæ with four spurs; palpi small, slender, porrect, projecting beyond the head, first and second joints laxly pilose beneath; antennæ broadly bipectinated. Female. Wings slightly longer; abdomen thick and very densely tufted at anal end.

Type, *E. chrysorrhœa*, Linn.

EUPROCTIS BIMACULATA (Plate 112, Fig. 6, ♂, *6b*, larva).

Euproctis bimaculata, Walker, Catal. Lep. Het. B. M. iv. p. 836 (1855), ♀.

Male: forewing pale whitish-ochreous, with a large triangular black spot at end of the cell: hindwing whiter. Body whitish-ochreous. Female: forewing paler, the cell spot larger than in male: hindwing white.

Expanse, ♂ $1\frac{1}{2}$, ♀ $2\frac{4}{10}$ inch.

Larva purple-brown, with dorsal and lateral rows of white-speckled tubercles, which are tufted with short brown hairs. Pupa reddish-brown, slightly tufted.

"Feeds on Acanthads, &c." (*Thwaites.*)

EUPROCTIS BIGUTTA (Plate 112, Fig. 6a, ♀).

Euproctis bigutta, Walker, Catal. Lep. Het. B. M. iv. p. 837 (1855) ♂.

Male and female. Creamy-white: forewing with a prominent black round spot at end of the cell. Front of the thorax ochreous-white; antennæ and legs above ochreous-white; anal tuft yellow.

Expanse, ♂ $1\frac{4}{10}$, ♀ 2 inches.

EUPROCTIS LUTESCENS (Plate 113, Fig. 1, ♂).

Euproctis lutescens, Walker, Catal. Lep. Het. B. M. iv. p. 837 (1855), ♂.

Male and female. Pale yellow: forewing with a prominent black quadrate spot at end of the cell. Thorax darker yellow; abdomen and tuft ochreous-yellow; palpi ochreous-yellow; legs pale yellow.

Expanse, ♂ $1\frac{2}{10}$, ♀ $1\frac{4}{10}$ inch.

EUPROCTIS TINCTIFERA.

Euproctis tinctifera, Walker, Catal. Lep. Het. B. M. xxxii. p. 349 (1865), ♂.

"Male. Whitish-testaceous. Wings shining: forewing white along base of the costa and about the apex; outline of the testaceous part forming two angles; a black point in the disc and another on the forepart of the exterior border: hindwing white, testaceous at the base and along the interior border; two black points on the forepart of the exterior border. Head and thorax snow-white.

"Expanse 12 lines."

Described by Mr. Walker from specimens in the collection of Mr. E. L. Layard, but which we have not been able to examine.

Genus CHÆROTRICHA.

Chærotricha, Felder, Reise Novara, Lep. iv. pl. 98 (1868-74).

Male: forewing triangular, slightly elongated; first subcostal emitted at a short distance before end of the cell, second quadrifid; discocellular concave, radial from upper end of the cell; two upper medians from angle at end of the cell, second at a short distance before the end, first or lower at one-third before the end; submedian recurved: hindwing short, exterior margin convex; costal vein arched at base; subcostal slightly touching costal in middle of the cell, two subcostal branches on a footstalk one-half beyond the cell; discocellular bent near the middle, lower end very oblique; three upper medians from angles at end of the cell, first or lower at one-third before the end. Body robust, thorax stout, pilose; palpi porrect, laxly squamose, apex conical; antennæ bipectinated; legs pilose beneath.

CHÆROTRICHA DECUSSATA (Plate 113, Fig. 2, 2*a*, ♂ ♀, 2*b*, larva).

Chærotricha decussata, Moore, Annals of Nat. Hist. 1877, p. 345, ♀.

Male and female. Deep ochreous-yellow, palest on the hindwing and abdomen: forewing very sparsely irrorated with prominent black scales; crossed by two medial indistinct greyish-brown angular-bordered recurved bands, which are slightly confluent below the cell; a small black spot at end of the cell.

Expanse, ♂ $1\frac{3}{8}$, ♀ $1\frac{7}{8}$ inch.

Larva thickish, tufted with short grey hairs; purple-brown, marked with numerous irregular pale reddish lines; a pale speckled dorsal tubercle on fifth, sixth, and twelfth segments, between which is a dorsal chain-like pale band; a black dorsal line on the anterior segments. Cocoon pale red, lax. Pupa reddish-brown, black speckled.

"Feeds on Loranthus." (*Thwaites.*)

Genus CISPIA.

Cispia, Walker, Catal. Lep. Het. B. M. iv. p. 857 (1855).

Forewing somewhat short, broad, triangular, costa convex; first subcostal emitted at one-fifth before end of the cell, second from the end, quadrifid, the third and fifth from below second at equal distances from its base, the fourth from third at half its length; discocellular bent close to upper end and deeply bent inward in the middle, radial from the angle; three upper medians from equidistant angles at end of the cell, first or lower at one-third before end of the cell; submedian much recurved: hindwing large, short, broad; costal vein arched at the base; subcostal slightly touching costal at middle of the cell, two subcostal branches at end of the cell; discocellular bent inward before the middle; three upper medians from angles at end of the cell, first or lower at one-third before the end; submedian and internal vein almost straight. Body long, somewhat slender, thorax compactly pilose, abdomen tufted at apex; palpi porrect, thick, laxly squamose; antennæ bipectinated; legs pilose beneath, hind tibiæ with four spurs.

Type, *C. punctifascia*.

CISPIA PUNCTIFASCIA (Plate 113, Fig. 3, ♂).

Cispia punctifascia, Walker, Catal. Lep. Het. B. M. iv. p. 857 (1855), ♂.

Male: forewing brownish-ochreous, all the veins lined with ochreous-white; a transverse medial oblique ochreous-yellow band bordered on each side by a row of black lunules; three small black spots also at base of the wing: hindwing ochreous-yellow. Body ochreous-yellow, thorax black spotted, abdomen with a lower dorsal and a lateral row of black spots; antennæ brown, shaft black; legs ochreous-yellow,

a black spot on tip of femora and a spot on middle of tibiæ. Female paler; the markings also paler.

Expanse, ♂ $1\frac{7}{8}$, ♀ $2\frac{3}{8}$ inches.

Genus REDOA.

Redoa, Walker, Catal. Lep. Het. B. M. iv. p. 826 (1855).

Forewing broad, triangular, slightly elongated, costa almost straight, apex acute, exterior margin nearly straight, oblique, posterior margin short; covered with raised scales; first subcostal branch emitted at one-sixth and second at one-twelfth before end of the cell, third at end of the cell, trifid, touching the second above the fifth; cell broad at the end; discocellular bent outward at upper end, concave below the middle, radial from upper angle; fourth or upper median from angle above end of the cell, third from the end, second at one-eighth and first at one-third before end of the cell; submedian slightly curved: hindwing very short, broad, triangular; costal vein extending to apex; subcostal arched and slightly touching costal near the base; two subcostal branches from end of the cell; cell broad its entire length; discocellular bent acutely inward in the middle; fourth or upper median from angle above end of the cell, third from the end, second from close to the end, first or lower at one-fifth before the end; submedian and internal vein nearly straight. Thorax stout, pilose, abdomen moderate, slightly tufted at apex; palpi porrect, extending slightly beyond the head, thick, obtuse in front, laxly squamose; antennæ short, broadly bipectinated; legs and tibiæ pilose. Female. Wings somewhat longer; body thick, abdomen stout; antennæ bipectinated; palpi smaller, legs less pilose.

Type, *R. submarginata*.

REDOA SUBMARGINATA (Plate 113, Fig. 4, ♂).

Redoa submarginata, Walker, Catal. Lep. Het. B. M. iv. p. 826 (1855), ♂; Moore, Catal. Lep. Mus. E. I. C. ii. p. 336, pl. 14, fig. 11, 11*a*; Butler, Types Lep. Het. B. M. v. p. 48, pl. 89, fig. 3, ♂.

Male and female. White: wings covered with raised silvery-white scales: forewing with the exterior margin and cilia slightly fuliginous-brown; a small black dot at end of the cell. Antennæ fuliginous-brown, shaft white; head, and palpi in front fuliginous-brown; legs white, femora, tibiæ, and tarsi each with a black spot.

Expanse, ♂ $1\frac{2}{8}$, ♀ $1\frac{6}{8}$ inch.

Genus KANCHIA.

Wings transparent: forewing slightly elongated, triangular, costa arched, exterior margin slightly oblique, posterior margin convex; first and second subcostal branches emitted together on a short footstalk one-eighth before end of the cell, third from end of the cell, trifid; discocellular bent inward in the middle, radial from a slight angle at upper end of the cell; upper median from angle above end of the cell, third from the end, second at one-sixth and first at one-half before end of

the cell, submedian slightly curved: hindwing short, triangular, apex convex; costal vein straight, extending to apex; subcostal arched and touching costal near the base; two subcostals on a footstalk one-third beyond end of the cell; discocellular bent acutely in the middle; upper median from angle above end of the cell, third from end, second at one-sixth, and first from one-third before the end; submedian and internal vein almost straight. Body short, slightly pilose; palpi slender, porrect; antennæ moderately bipectinated; legs slightly pilose.

KANCHIA SUBVITREA (Plate 113, Fig. 5).

Leucoma subvitrea, Walker, Catal. Lep. Het. B. M. xxxii. p. 344 (1865), ♂.

Wings transparent, glassy, irridescent; veins whitish. Body white, slightly pilose; palpi, antennæ, and legs ochreous-white.

Expanse, ♂ $1\frac{2}{10}$, ♀ $1\frac{3}{8}$ inch.

Genus PERINA.

Perina, Walker, Catal. Lep. Het. Brit. Mus. iv. p. 966 (1855), ♂.

Male: forewing transparent from near the base, slightly elongated, costa arched towards the end, apex pointed, exterior margin very oblique, posterior margin and angle very convex; first subcostal branch emitted immediately before end of the cell, second from the end, trifid, the third from below the second at one-third from its base, and the fourth at one-third from the base of third; cell extending nearly two-thirds the wing, upper end the longest; discocellular bent close to upper end and acutely inward below the middle, radial from the upper angle; two upper medians joined at their base and emitted from acute angle at lower end of the cell, second at a short distance before the end, first or lower at more than one-third before the end; submedian slightly curved: hindwing short, broad, somewhat quadrate, exterior margin slightly angular in the middle, abdominal margin long; apex transparent; costal vein arched at the base, recurved; subcostal slightly arched before end of the cell, one subcostal branch only from end of the cell; discocellular bent acutely inward near upper end, lower end very long; cell very long, lower end extending five-sixths the wing; two upper medians from angle at end of the cell, second from a very short distance before the end, first or lower at one-fifth before the end; submedian and internal vein straight. Thorax moderately stout, smoothly pilose, abdomen tufted at apex; palpi small, porrect, slender, laxly pilose beneath; antennæ broadly bipectinated, the branches decreasing to the tip; femora and tibiæ pilose, middle and hind tibiæ with two short terminal spurs. Female: forewing entirely covered with scales; elongated, exterior margin convex; venation as in male: hindwing longer than in male, exterior margin convex, abdominal margin short; cell extending to a little over half the wing; two subcostal branches on a

footstalk half beyond the cell; discocellular bent acutely inward before the middle; three upper medians as in male, the first or lower at one-third before end of the cell; submedian and internal vein slightly curved. Body robust; antennæ with shorter branches to the tip; femora and tibiæ less pilose, middle and hind tibiæ with two short spurs.

PERINA NUDA (Plate 114, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Bombyx nuda,* Fabricius, Mant. Ins. ii. p. 117 (1787), ♂.

Perina basalis, Walker, Catal. Lep. Het. B. M. iv. p. 966 (1855), ♂; Moore, Catal. Lep. Mus. E. I. C. ii. p. 349, pl. 16, fig. 4.

Euproctis antica, var. C., Walker, Catal. Lep. Het. B. M. iv. p. 835, ♀.

Stilpnotia subtincta, Walker, *id.* p. 843 (1855), ♀.

Euproctis combinata, Walker, *id.* xxxii. p. 347 (1865), ♀.

Male: forewing transparent, except at the base, which is obliquely covered with pale ochreous-brown scales: hindwing pale ochreous-brown, darkest towards anal angle; a transparent spot at the apex; thorax pale ochreous-brown, abdomen blackish, with narrow whitish segmental bands, anal tuft reddish-ochreous; head, palpi, and legs above pale reddish-ochreous; antennæ brown. Female dull ochreous-white, the base of posterior border sparsely irrorated with minute black scales. Body dull ochreous-white; head, palpi, legs, and anal tuft pale ochreous.

Expanse, ♂ $1\frac{3}{8}$, ♀ $1\frac{5}{8}$ inch.

Larva pale greyish-green, with a dorsal series of short tufts of blackish hairs, a longer tuft projecting over the head and anal segment, and a lateral pendant row of tufts of longish grey and black hairs; a dark sap-green dorsal band broken by a whitish band on second, third, and fourth segments, two red spots on the green band on the side of second, third, and fourth segments; a subdorsal row of dark blue tubercular spots from fifth segment. Pupa greenish, hairy, with red spotted black thorax and dorsal segments.

"Feeds on Acanthads." (*Thwaites.*)

Genus PSALIS.

Psalis, Hübner, Zuträge, Samml. Exot. Schmett. pt. ii. p. 19 (1823).

Arestha, Walker, Catal. Lep. Het. B. M. iv. p. 805 (1855).

Anchyneura, Felder, Sitz. Acad. Wiss. 1861, p. 33.

Male: forewing elongated, narrow, costa arched, exterior margin slightly oblique, posterior margin nearly straight; first subcostal emitted at one-half before end of the cell, second at one-sixth before the end, trifid, the third from below at one-fifth from base of the second, fifth from end of the cell, ascending and joined to third by a short spur near its base; cell extending three-fifths the wing; discocellular

* The Fabrician type specimen of this insect is contained in the Banksian Cabinet at the British Museum.

bent outward near upper end, lower end concave, slender, radial from the upper angle; two upper medians from angles above end of the cell, second at one-tenth and first or lower at one-sixth before end of the cell; submedian curving downward from its base: hindwing short, broadly triangular, exterior margin very convex; subcostal joined to costal for a short distance near its base; two subcostal branches on a footstalk one-fourth beyond the cell; discocellular deeply concave; upper median from angle above end of the cell, two middle medians from acute angle at end of the cell, first or lower median at more than one-third before the end; submedian and internal vein straight. Thorax robust, abdomen extending beyond the wing, tufted at apex; palpi porrect, projecting beyond the head, thick, densely pilose beneath, apex truncated; antennæ broadly bipectinated, legs and tarsi pilose. Female. Wings longer: forewing much produced at the apex, costa very convex: hindwing slightly produced at the apex; antennæ finely pectinated; all the legs and tarsi more hairy.

PSALIS SECURIS (Plate 115, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Psalis securis, Hübner, Zuträge, Samml. Exot. Schmett. pt. ii. p. 19, fig. 291-2 (1823) ♀; Moore, Catal. Lep. Mus. E. I. C. ii. p. 338, pl. 14, fig. 12, 12*a*.
Deprana securis, Walker, Catal. Lep. Het. B. M. vii. p. 1762.
Arestha antica, Walker, *id.* iv. p. 805 (1855), ♂.
Rigema falcata, Walker, *id.* xxxii. p. 437 (1865), ♀.
Anticyra approximata, Walker, *id.* xxxii. p. 440, ♀.

Male and female: forewing pale brownish-ochreous, with a dark purplish grey-brown longitudinal medial band widening from the base to the exterior margin, the posterior border with a few scattered black scales, and a minute black spot above the angle; cilia alternated with grey and brown: hindwing pale ochreous-white. Body pale brownish-ochreous; antennæ, palpi, and legs above ochreous-brown.

Expanse, ♂ $1\frac{2}{8}$, ♀ $1\frac{5}{8}$ inch.

Larva black, with a few ochreous hairs along the back and black hairs from the sides, two long tufts of black hairs projected in front of the head and a tuft from anal segment; a short dense dorsal tuft of red hairs on fifth to eighth segments, and a smaller tuft on tenth and eleventh segments; a dorsal and lateral row of green spots, and a similar coloured lower lateral line; head and legs red. Cocoon fusiform, olivaceous-green. Pupa olivaceous-green, hairy, thorax and wing cases black, abdominal segments with longitudinal black streaks.

"Feeds on grasses." (*Thwaites.*)

Genus OLENE.

Olene, Hübner, Zuträge, Samml. Exot. Schmett. fig. 293-4 (1823).
Nioda, Walker, Catal. Lep. Het. B. M. v. p. 1069 (1855).
Rilia, Walker, *id.* v. p. 1075 (1855).

Male: forewing elongated, narrow, exterior margin oblique; first subcostal

emitted at one-third before end of the cell, second at one-sixth, trifid, the third from below second at one-fourth from its base, fifth from end of the cell, ascending upward and touching third near its base; discocellular bent in the middle; radial from upper end of cell; two upper medians from angles at end of the cell, second at one-eighth and first at one-fourth before end of the cell; submedian much curved downward from the base: hindwing short, broad, triangular; costal vein extending to apex; subcostal with two branches on a footstalk one-sixth beyond end of the cell; discocellular bent in the middle; two upper medians from angles at end of the cell, second at one-eighth, first or lower at one-third before end of the cell; submedian and internal vein straight. Body moderate, abdomen tufted at apex; palpi not extending beyond the head, second joint laterally thick, compactly pilose, very obtuse at the apex; antennæ broadly bipectinated; legs pilose, hind tibiæ with four spurs. Female. Wings longer; veins as in male: forewing with the costa much arched, apex somewhat produced, exterior margin oblique and slightly concave towards posterior angle. Body thick; palpi smaller, laxly pilose; antennæ minutely pectinated.

Type, *O. mendosa.*

OLENE MENDOSA (Plate 115, Fig. 4, 4*a*, ♂ ♀, 4*b*, larva).

Olene mendosa, Hübner, Zuträge, Samml. Exot. Schmett. fig. 293-4 (1823), ♀; Moore, Catal. Lep. Mus. E. I. C. ii. p. 341, pl. 15, fig. 3, 3*a*.

Rilia lanceolata, Walker, Catal. Lep. Het. B. M. v. p. 1075 (1855), ♀.

Male: forewing pale greyish brownish-ochreous, with a longitudinal dark blotched-brown fascia extending from the base below the cell to exterior margin, the inner border of the fascia being excavated near the base and again towards the end, and crossed by an indistinct discal blackish-lunular line and a submarginal row of short black pale-bordered lunular marks: hindwing pale brownish-ochreous. Antennæ, palpi, and legs above pale brown. Female pale greyish purplish-brown: forewing with the costal border and the cell palest; a darker brown fascia from base below the cell and extending broadly before the apex, the fascia marked with longitudinal black streaks; an indistinct antemedial and a postmedial sinuous black line, and a submarginal lunular line; a lunular mark at end of the cell.

Expanse, ♂ 1⅜, ♀ 2 inches.

Larva pale purplish-white, numerously covered with purple-brown speckles; a pale lateral line below the speckles, a dorsal row of crimson spots from eighth segment, a lateral row from third segment, and a lower row from seventh segment; head and legs crimson; with dorsal and lateral sparse tufts of short purple-brown fine hairs, two long tufts projected over the head and two over anal segment, a short dense dorsal tuft of whitish hairs on fifth to eighth segment, and a pendant lateral tuft on fifth and sixth segment; a black dorsal row of spots from fifth segment, that

from the eighth segment white bordered in front; a black spot above the legs Pupa pale olivaceous-red, thorax brownish, red spotted; slightly hairy.

"Feeds on Citrus." (*Thwaites.*)

OLENE FUSIFORMIS (Plate 115, Fig. 3, ♀).

Nioda fusiformis, Walker, Catal. Lep. Het. B. M. v. p. 1070 (1855), ♀.

Female. Greyish brownish-white: forewing crossed by a brown zigzag antemedial line and a darker postmedial double lunular band, the medial area whitish, the basal and discal areas brownish; some dark brown streaks at the base, and a dark brown discocellular lunular mark with contiguous outer patch; a submarginal series of pale-bordered black lunules: hindwing brownish-white. Body, antennæ, and legs pale brownish-white.

Expanse, ♀ $1\frac{6}{8}$ inch.

OLENE BASIVITTA (Plate 115, Fig. 2, ♀).

Rilia basivitta, Walker, Catal. Lep. Het. B. M. xxxii. p. 436 (1865), ♀.
? *Nioda transversa*, Walker, *id.* p. 434, ♂.

Female. Pale brownish-ochreous: forewing minutely brown speckled; crossed by an indistinct antemedial and a postmedial slender blackish line; some submarginal indistinct black points; a short blackish basal streak below the cell, one below the lower median vein, and another on the costa before the apex; a brown patch beyond the cell: hindwing paler.

Expanse, ♀ $1\frac{4}{8}$ inch.

Genus DASYCHIRA.

Dasychira, Stephens, Illust. B. Ent. Haust. ii. p. 58 (1828).

Male: forewing elongated, narrow; first subcostal emitted at one-third before end of the cell, second at one-eighth, trifid, third from second at one-fifth from its base, fifth from end of the cell, ascending upward and touching third near its base; discocellular inwardly oblique, bent below the middle, radial from upper end of cell; two upper medians from an angle at end of the cell, second at one-eighth and first at one-third before end of the cell; submedian recurved: hindwing short, exterior margin convex; costal vein extending to apex; two subcostals from upper end of the cell, joined at their base; cell extending to half the wing; discocellular concave; upper median from an angle above end of the cell, two middle medians from angle at the end, joined together at their base, first at one-third before the end; submedian and internal vein straight. Body stout, pilose; palpi porrect, thick, laxly pilose beneath, second joint extending slightly beyond the head, third minute; antennæ bipectinated; legs and tarsi pilose, middle and hind tibiæ spurred. Female. Wings longer. Body thicker; antennæ minutely bipectinated.

Type, *D. pudibunda*.

DASYCHIRA THWAITESII (Plate 116, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Male: forewing greyish-white, crossed by a basal, antemedial, and a postmedial indistinct black-speckled sinuous duplex line, and a marginal single line; a lunular mark at end of the cell; the lines slightly dilated at the costal end: hindwing pale brown, the costal border and cilia greyish-white. Thorax, head, palpi, and legs greyish-white, abdomen pale brown; thorax slightly brown speckled; sides of head and palpi blackish; legs with black spots; antennæ ochreous-brown, shaft white. Female: forewing greyish-white, irrorated with numerous brown scales, the transverse sinuous lines much less defined, being mostly apparent at the costal end and composed of scattered brown scales: hindwing white, with a few brown scales from the anal angle. Body greyish-white; thorax brown speckled; legs and antennæ as in male.

Expanse, ♂ $1\frac{1}{2}$, ♀ $2\frac{3}{4}$ inches.

Allied to *D. Horsfieldii.* Male smaller: forewing whiter, the transverse lines more distinct and sinuous, less oblique; the discocellular lunular mark not bent below the middle: hindwing and abdomen uniformly brown in colour.

Larva. Male pale greenish, thickly covered with tufts of long yellowish hairs; a short dense dorsal tuft on fifth to eighth segment; a black spot between fifth and sixth dorsal tuft; head and legs yellow. Female greenish-grey, with all the hairs, head, and legs pale red. Pupa green in male, red in female; dorsally hairy.

"Feeds on *Erythrina indica*, &c." (*Thwaites.*)

Genus CALTURA.

Caltura, Moore, Proc. Zool. Soc. 1879, p. 401.

Wings broad: forewing triangular, elongated in female; costa arched at base, apex rounded, exterior margin oblique; first branch of subcostal vein emitted at some distance before end of the cell, second quadrifid, fifth or lowest being nearest the cell; discocellular bent in the middle; radial from upper end of discocellular; median vein four-branched, two upper from angles at end of the cell: hindwing broad, apex and exterior margin very convex; subcostal two-branched from angle at end of the cell; discocellular bent inward before the middle, lower end very oblique; median veins as in forewing. Body moderate; abdomen as long as hindwing. Palpi pilose, porrect. Legs covered with short spinous hairs. Antennæ bipectinated.

CALTURA ALBA (Plate 114, Fig. 2, 2*a*, ♂ ♀, 2*b*, larva).

Caltura alba, Moore, Proc. Zool. Soc. 1879, p. 401.

Male and female: white, semidiaphanous; covered with raised white scales: forewing with two transverse black lines, the first subbasal and zigzag, the other discal, oblique, and bent near the costa; a short oblique black streak at upper end

of cell; both wings with a marginal row of small black spots. Thorax black spotted; abdomen in male with a dorsal and lateral row of black spots. Legs hoary above.

Expanse, ♂ $1\frac{6}{8}$, ♀ $2\frac{3}{8}$ inches.

Larva pale sap-green, with short blackish and brown hairs, the anterior and posterior brown hairs projected forward; the lateral tufts arising from three rows of red tubercles; along the back are some slender white lines and along the side three similar lines, a whitish spot also in front of each dorsal tuft of hair; head and legs purple-brown. Pupa greenish or bluish-green, hairy, marked with black speckled lines on head and front and spotted marks on dorsal and abdominal segment.

"Feeds on *Dysoxylon*." (*Thwaites.*)

Genus LYMANTRIA.

Lymantria, Hübner, Verz. bek. Schmett. p. 160 (1818-25).
Psilura, Stephens, Illust. Brit. Ent. Haust. ii. p. 57 (1828).

Forewing triangular, elongated in female; first subcostal vein emitted at one-eighth before end of the cell, second from end of the cell, quadrifid, third at one-fifth from base of second, fourth at one-third from the apex, fifth from below third close to its base; cell broad; discocellular acutely bent in the middle, radial from upper end of the cell; two upper medians from angle at end of the cell, second at one-seventh, first or lower at three-sevenths before the end; submedian slightly recurved: hindwing short, triangular, exterior margin convex; cell broad; two subcostals from end of the cell; discocellular bent before the middle; three upper medians from contiguous angles at end of the cell, first or lower at one-third before the end; submedian and internal vein straight. Body moderately slender, hairy, tufted at apex in male, rather short and attenuated at apex and with exserted ovipositor in female; palpi porrect, hairy, clavate, second joint long, projected beyond the head, third joint minute, pointed at tip; antennæ short, broadly bipectinated in male, with short broad branches in female; legs hairy, hind tibiæ with four spurs.

Type, *L. monacha*.

LYMANTRIA GRANDIS.

Lymantria grandis, Walker, Catal. Lep. Het. B. M. iv. p. 874 (1855), ♀; Butler, Types Lep. Het. B. M. v. p. 57, pl. 91, fig. 1, 2, ♂ ♀.
Lymantria maculosa, Walker, *id.* iv. p. 881 (1855), ♂.
Lymantria metarhoda, Walker, Trans. Ent. Soc. Lond. (1861), p. 78, ♂.

Male: forewing ochreous-white, crossed by three basal brown macular bands, three oblique discal sinuous bands, an interrupted submarginal sinuous band, and a marginal row of spots; a bent lunular mark at end of the cell, and a spot in middle of the cell; two black spots at base of the wing: hindwing pinkish-red, with an indistinct pale brown submarginal slender band; a lunular spot at end of the cell. Thorax and head white, black spotted; abdomen pinkish-red, with two lateral rows

of black spots, tuft white; antennæ brown, shaft white; palpi in front, sides of head, basal joint of antennæ, and two spots on middle of thorax red; legs white, with red bands, forelegs with black and red bands. Female: forewing ochreous-white, with black and red basal spots and a narrow waved band, a transverse brown antemedial interrupted band dilated on the costa, and a broad angular sinuous-bordered postmedial band, and a submarginal series of broad dentate marks; a marginal row of small black spots; costal edge and cilia pinkish-red: hindwing brighter red than in male, with a submarginal narrow brown lunular complete band, cilial spots, and a spot at end of the cell. Body as in male, with slight dorsal basal brown bands, apex brownish.

Expanse, ♂ 2¼, ♀ 4¼ inches.

Larva brownish-black; fifth to last segment each with two dorsal black hairy tubercles, the anterior segments with short dorsal tufts; a lateral row of pale centred tubercles, from which radiate tufts of black hairs, one tuft on each segment; two long tufts of black hairs projected in front of the head and six tufts from anal end. Pupa dark brown, with lateral and dorsal tubercular tufts.

"Feeds on *Careya arborea*, &c." (*Thwaites.*)

LYMANTRIA OBSOLETA.

Lymantria obsoleta, Walker, Catal. Lep. Het. B. M. iv. p. 880 (1855), ♂.
Lymantria lunulata, var. *β*, Walker, *id.* iv. p. 879, ♀.
Lymantria Bhascara, Moore, Catal. Lep. Mus. E. I. C. ii. p. 345 (1858), ♀.

Male: forewing greyish ochreous-brown or pinkish-brown, numerously speckled with dark brown; crossed by two ill-defined antemedial and a postmedial black-speckled zigzag band, a submarginal grey-centred lunular band, and marginal spots which also cross the cilia; a black angular streak at end of the cell: hindwing pale greyish-ochreous, with a faint brownish marginal band. Body greyish-brown, abdomen reddish at the tip; palpi, antennæ, and legs greyish-brown. Female: forewing darker, the black-speckled bands more irregular, the angular streak at end of the cell distinct: hindwing pale crimson, with a broad brown band. Cilia pale pinkish-brown, with blackish spots. Thorax brown, abdomen crimson, with brown bands.

Expanse 1⅝ to 2 inches.

The following insect, described by Mr. Nietner, probably belongs to the Liparidæ. The description given is too vague for identification.

TRICHIA EXIGUA.

Trichia exigua, Nietner, Observations on the Enemies of the Coffee Tree in Ceylon, p. 20 (1861).

"Forewings yellowish-grey, with some yellow spots: hindwings yellowish.
"Expanse 1 inch.

"Larva $\frac{1}{2}$ to $\frac{3}{4}$ inch long; brown above, grey below, variegated with red and yellow lines and dots; hairy; each segment with two short tufts; behind head two fleshy earlike protuberances; a haunch upon forepart of back. Spins a light cocoon, from which the moth escapes in two weeks.

"Feeds on the Coffee-tree, orange and other trees."

Family PSYCHIDÆ.

Male. Wings mostly sparsely clothed with hair-like scales; some genera semi-transparent; cell traversed by a single or forked very slender veinlet: forewing either moderately long or short: hindwing short. Body pilose, abdomen extensile; palpi short, pilose; antennæ bipectinated, the branches plumose; legs sparsely pilose. Female vermiform, closely resembling the larva; wingless, with rudimentary legs and antennæ; remaining in the larval case, the male inserting its abdomen therein during coition.

Larva naked; constructs a portable silken case, which is more or less covered with pieces of stems or leaves of the food-plant, in which the larva lives and undergoes its transformations, the larva, previous to assuming the pupa state, fastening the mouth of the case to the shrub or tree, the male larva turning so that its head is pointed to the opposite end, out of which the pupa is exserted on the emergence of the imago.

"The Singalese call these larva cases *Dara-kattea*, or 'billets of firewood,' and regard the inmates as human beings, who, as a punishment for stealing wood in some former state of existence, have been condemned to undergo a metempsychosis under the form of these insects." (*Tennent, Natural History of Ceylon, p.* 430.)

Genus EUMETA.

Eumeta, Walker, Catal. Lep. Het. B. M. iv. p. 964 (1855).
Cryptothelea, Walker, *id.* p. 970 (*nec* Duncan).

Male. Wings clothed with short hairy scales: forewing elongated, narrow, slightly arched towards the tip, exterior margin oblique; cell long, extending two-thirds the wing, narrow from the base to half its length and dilated at its end; first subcostal emitted at one-third before end of the cell, second from close to its end, third and fifth from slight angles at end of the cell, third bifid at half its length; discocellular bent in the middle, upper end recurved; radial from upper end of discocellular; a slender forked discoidal veinlet emitted within the cell; two upper median branches on a footstalk one-third beyond the cell, second at one-twelfth and first or lower at one-sixth before end of the cell; submedian recurved, with a very slender branch curving upward and inward at one-third from its end and extending

to near its base, also a lower branch from near its base: hindwing short, broad, costa much arched, apex convex; costal vein arched, extending to apex, with a short upper spur from near its middle; subcostal not branched; cell very broad at its end; discocellular outwardly oblique, slightly concave, radial from its middle; a slender forked discoidal veinlet emitted within the cell; two upper median branches from acute angle at end of the cell; second at one-ninth, and first or lower at nearly one-third before end of the cell; a straight submedian and internal veins. Body laxly pilose, thorax stout, abdomen extending beyond hindwings, and appendage generally exserted; palpi short, thick, hairy, recumbent; antennæ bipectinated to the tip, branches pubescent; legs rather slender, femora and tibiæ laxly pilose, fore tibia with a long appendage springing from its base.

EUMETA CRAMERII (PLATE 118, FIG. 1, ♂, 1*a*, larval case).

Oiketicus Cramerii, Westwood, Proc. Zool. Soc. Lond. 1854, p. 236, pl. 37, fig. 4.
Cryptothelea consorta, Walker, Catal. Lep. Het. B. M. iv. p. 970 (*nec* Templeton).
Eumeta Nietneri, Felder, Reise Novara, Lep. iv. pl. 83, fig. 21 (1868-74).

Male. Greyish-brown: forewing with the median vein and subcostal branches and the submedian vein black, interspaces between lower subcostal and the radials and between the forked upper medians hoary-white, the interspace between lower radial and upper median and below the submedian being rufous-brown. Body brown, thorax with a few interspaced long fine black hairs; legs yellow, femora and tibiæ very laxly covered with fine long brown and black hairs.

Expanse $1\frac{1}{10}$ to $1\frac{2}{10}$ inch.

Larval case covered with slender twigs of irregular length, which are disposed longitudinally side by side in a somewhat spiral form.

Mr. Walker (*l.c.* p. 970) described this species as the *O. consortus* of Templeton, and placed it under that name in the British Museum Collection.

EUMETA LAYARDII (PLATE 118, FIG. 2, ♂, 2*a*, larval case).

Eumeta Cramerii, Walker, Catal. Lep. Het. B. M. iv. p. 964 (*nec* Westwood).

This species differs from *E. Cramerii* in its much larger size, and in the forewing being more produced at the apex: forewing of a much brighter rufous-brown colour on the anterior and posterior borders, has blacker streaks along the veins, and a diffused exterior band; the cell and interspace between it and submedian vein, and the apical streaks semi-transparent. Body brighter coloured, with dark black tufted streaks on thorax and sides of abdomen; palpi, base of antennæ, and legs also black streaked.

Expanse $1\frac{6}{8}$ inch.

Larval case covered with stoutish twigs, which are disposed side by side in a regular longitudinal form.

Genus BAMBALINA.

Male: forewings shorter and more triangular than in Eumeta, the costa more arched towards the end, exterior margin more oblique; cell broader and shorter posteriorly; discocellular more angulated; submedian with the curved upper branch from near the middle, lower basal branch not apparent: hindwing short, exterior margin convex; cell broader and longer posteriorly; discocellular more angulated; two upper median branches on a footstalk beyond the cell. Body and legs laxly pilose; antennæ bipectinated.

BAMBALINA CONSORTA (Plate 118, Fig. 3, ♂, 3*a*, larval case).

Oiketicus (*Cryptothelea*) *consorta*, Templeton, Trans. Ent. Soc. Lond. 1846, p. 40, pl. 5, fig. 5-7; Westwood, Proc. Zool. Soc. Lond. 1854, p. 235, pl. 36, fig. 3.

Male. Wings uniformly brown. Body brown, covered with coarse long brown hairs, anal segments yellow with dark margins; anterior legs with marginal brown hairs, posterior legs nearly naked, middle legs intermediate in this character; antennæ dark brown.

Expanse $1\frac{5}{8}$ inch.

Larval case of a lengthened conical shape, formed of compact greyish-white silk, occasionally with a few particles of twigs on the surface.

"Larva feeds on Pamplemos bush (*Citrus decumana*)." (*Templeton.*)

Genus DAPPULA.

Male. Wings sparsely covered with coarse short hair-like adpressed scales: forewing elongated, triangular; apex produced, exterior margin very oblique; cell extending two-thirds the wing, lower part shortest; costal vein widely separated from the margin; first subcostal branch emitted at one-third before end of the cell, second at one-ninth, third trifid; discocellular inwardly oblique, bent near upper end and in the middle, emitting a discoidal veinlet from the middle angle and another from the lower end, which join together and extend to the base; radial from upper angle of discocellular; two upper median branches from angle at end of the cell, the two lower branches from angles obliquely below end of the cell; submedian with a short upper branch curved inwards from two-thirds its length, and a short spurred lower loop also from near the base: hindwing short, triangular, apex produced, exterior margin concave, anal angle convex; cell broad; a forked veinlet emitted within the cell; median branches from angles obliquely below end of the cell. Body long, somewhat slender, pilose, abdomen laterally tufted; antennæ pectinated to about half the length, serrated thence to the tip; forelegs long, with marginal hairs, and a strong sharp spur from base of tibiæ; tarsi and hindlegs nearly naked.

DAPPULA TEMPLETONII (Plate 118, Fig. 6, ♂, 6*a*, larval case).

Oiketicus tertius, Templeton, Trans. Ent. Soc. Lond. v. p. 39, pl. v. f. 1-4 (1846).
Oiketicus Templetonii, Westwood, Proc. Zool. Soc. Lond. 1854, p. 234, pl. 34, fig. 2.
Eumeta Templetonii, Walker, Catal. Lep. Het. B. M. iv. p. 965.

Male. Wings sparsely covered with short hair-like adpressed dark grey scales : forewing with a black streak at upper end of the cell and an interrupted streak between it and the apex : hindwing concolorous. Body purplish-black, covered with very coarse longish hairs ; abdomen dark brown, with lateral tufts of hair ; antennæ brown.

Expanse 1½ inch.

Larval case bluntly fusiform, silky, naked.

"Larva feeds on *Citrus decumana*." (*Templeton.*)

Genus MANATHA.

Manatha, Moore, Annals of Nat. Hist. 1877, p. 346.

Wings short, broad, covered with brown scales : forewing trigonate ; costal vein extending to beyond half of wing ; subcostal vein five-branched, first and second branches arising from before end of cell, third and fifth at end of the cell, fourth from below third at half its length and terminating at the apex ; cell broad and cleft at its end ; discocellulars long, upper bent inward at near its middle and emitting from its end a discoidal vein within the cell which extends towards its base and there throws off a lower short branch, lower discocellular very oblique ; one radial starting from angle of upper discocellular ; median vein four-branched, two lower branches from before end of the cell, the upper branch short and arising from the third beyond end of the cell ; submedian vein bent upward near base of the cell, sending forth a lower branch from half its length, which branch is also bent hindward, and has a second lower parallel-branch or internal-veinlet, to which it is joined at the angle by a short cross branch : hindwing slightly pointed at the apex, exterior margin rounded ; costal and subcostal veins running parallel to below apex and joined together by a short cross oblique branch before end of the cell ; cell broad, short at its upper and long at its lower end ; upper discocellular bent outward at its middle, from the angle of which starts the radial ; lower discocellular long and parallel to end of the median ; median vein four-branched, disposed as in forewing ; a straight submedian and two internal veins. Thorax rather broad, clothed with closely adpressed hairs. Abdomen attenuated, extending beyond hindwing. Antennæ short, bipectinated. Tibiæ clothed with long hair, tarsi nearly naked.

Type, *Manatha albipes*.

MANATHA ALBIPES (Plate 118, Fig. 4, ♂, 4*a*, larval case).

Manatha albipes, Moore, Annals of Nat. Hist. 1877, p. 347.

Male: wings brown; body fuliginous-brown. Antennæ and legs darker brown; tarsi pure white.

Expanse $\frac{9}{12}$ inch.

Larval case conical, small, silky, slightly covered with pieces of thin bark or lichen, the specimen under examination having the heads of six (or more) young (?) larvæ protruding from the upper end, one (the largest) from an extended sac in the middle, the others from separate sac-like openings below and around the upper one; from the lower end of this same example protrudes the empty pupa case from which the perfect insect (? female) had escaped.

Genus METISA.

Metisa, Walker, Catal. Lep. Het. B. M. iv. p. 957 (1855).

Male. Wings small, semi-transparent, very slightly clothed with short fine hairy scales: forewing short, broad, apex rounded; costal vein very slender; first subcostal branch emitted at one-third before end of the cell, second at one-sixth before the end, trifid; cell broad, obliquely convex at its end; discocellular convex, slightly bent outward in the middle; a forked discoidal veinlet emitted within the cell from the angle and lower end; radial from angle in middle of the discocellular; two upper median branches from angle at end of the cell, two lower branches from angles obliquely below end of the cell; submedian slightly bent downward at one-third and upward at two-thirds its length, and emitting a very short lower spur from its basal angle: hindwing short, broad, apex and exterior margin very convex; costal and subcostal vein confluent to end of the cell, from the upper angle of which two branches are emitted; cell broad, acutely angulated at its end; discocellular bent near upper end and acutely inward below the middle, emitting a forked veinlet within the cell; radial from upper angle of discocellular; two upper median branches from outwardly oblique angles at end of the cell, two lower branches at inward angles before the end. Body very small, short, and slender, almost bare; antennæ short, broadly bipectinated to tip, branches pubescent; legs very slender, almost bare.

METISA PLANA (Plate 118, Fig. 9, ♂).

Metisa plana, Walker, Catal. Lep. Het. B. M. iv. p. 958 (1855).

Male. Wings semi-transparent; fuliginous-brown. Body black; antennæ brown.

Expanse $\frac{7}{12}$ inch.

Genus CHALIA.

Chalia, Moore, Annals of Nat. Hist. 1877, p. 345.

Wings quite transparent, naked; abdominal border fringed with fine hairs: forewing short, broad, arched at the base, rounded at apex and at posterior angle; cell broad, upper part longest; subcostal vein five-branched, the branches very short, first and second arising before end of the cell, fourth and fifth at equal distances from lower side of third and terminating below the apex; discocellulars inwardly oblique, lower bent inward at half its length; discoidal veinlet emitted from angle of lower discocellular and anastomosing with subcostal near end of the cell; one radial emitted from lower end of upper discocellular; median vein four-branched, the two lower from before end of the cell, curved, third at end of the cell, fourth short and emitted at half the length of the latter; submedian vein recurved to two-thirds its length, thence straight to posterior angle, throwing off an upper branch: hindwing short, broad, rounded at apex and anal angle; cell broad; subcostal vein arched at the base, extending to apex; upper discocellular straight and erect, lower bent inward at its middle and emitting a discoidal veinlet which extends to base of the cell; median vein three-branched; submedian and internal vein straight; body slender, densely pilose, the hairs standing out in lateral tufts; abdomen extending beyond hindwings. Antennæ deeply bipectinated; legs slender.

CHALIA DOUBLEDAYII (Plate 118, Fig. 5, ♂, *5a*, larval case).

Oiketicus Doubledayii, Westwood, Proc. Zool. Soc. Lond. 1854, p. 235, pl. 34, fig. 4.
Psyche Doubledayii, Walker, Catal. Lep. Het. B. M. iv. p. 956.
Chalia Doubledayii, Moore, Annals of Nat. Hist. 1877, p. 346.

Male. Wings bare, transparent, vitreous; veins whitish. Body pitchy-black, laxly clothed with long dark grey-brown hairs; antennæ brown; legs dirty yellow.

Expanse $\frac{7}{10}$ inch.

Larval case slender, silky, with a few very thin twigs arranged longitudinally on the surface.

Genus APRATA.

Male. Wings covered with minute adpressed scales; costal margin with a slight fringe; cilia composed of spatulate scales: forewing elongated, costa arched at the base, apex rounded, exterior margin oblique and slightly convex, posterior margin short; costal vein extending to middle of margin; subcostal vein four-branched, first branch arising at half length of the cell, second and third at slight angles near its end; discocellulars short, slightly oblique; radial starting from their middle; cell broad; two discoidal veinlets extending from middle of discocellulars within the cell, which are joined together beyond half its length and then extend to

its base; median vein four-branched, the two upper from angles at end of the cell; a submedian and internal vein running parallel with hind margin: hindwing elongated, anterior margin arched at base, apex slightly produced upward, exterior margin convex; costal vein recurved and extending to apex; subcostal bent at end of the cell and thence straight to below the apex; discocellulars very oblique; radial from their middle; cell short, broad; a single discoidal veinlet emitted within from middle and extending to base of the cell; median vein four-branched, the two upper on a footstalk beyond the cell; a submedian and an internal vein, short. Antennæ short, slender, minutely plumose; legs slender, minutely pilose; thorax finely pilose; abdomen attenuated, finely pilose; anal tuft densely pilose.

Type, *A. Mackwoodii.*

APRATA THWAITESII (Plate 118, Fig. 7, ♂, 7*a*, larva case).

Upperside dark purple-brown, longitudinally black streaked: forewing with a pale yellow apical transverse band traversed by a marginal row of black dots; a pale yellow narrow patch on middle of hind margin, streaked with red and inwardly bordered by a white spot; cilia brown on forewing, yellowish on hindwing. Body yellow, head and front of thorax, and a spot on middle of thorax, red; abdomen with blackish bands; antennæ and legs brown.

Expanse $\frac{7}{10}$ inch.

Larva five-tenths of an inch long, pale yellow, tinged with pink above; the head, the second segment, a lateral row of dots, and forelegs black; third and fourth segments with a medial black line. Constructs a small flattened heliciform case.

"Feeds on *Eugenia* (*Syzygium*) *caryophyllæum.*" (*Thwaites.*)

APRATA MACKWOODII (Plate 118, Fig. 8, ♂).

Wings dark purplish cupreous-brown. Head, thorax, and antennæ black; abdomen and tarsi golden-yellow; anal tuft silky white.

Expanse $\frac{10}{12}$ inch.

Family NOTODONTIDÆ.

Subfamily DICRANURINÆ.

Wings somewhat long and narrow. Antennæ bipectinated in both sexes, or only so in male, with the tip filiform, and the female filiform throughout; legs densely pilose.

Larva with fourteen legs, naked, with an anterior dorsal prominence, or with several acute dorsal prominences; anal prolegs obsolete, being replaced by two projecting appendages. When at rest the posterior, or both anterior and posterior segments, carried erect. Cocoon generally of a hard texture.

Genus HARPYIA.

Cerura (part), Schrank, Fauna Boica ii. 2, p. 155 (1802).
Harpyia, Ochsenheimer, Schmett. Eur. iii. p. 19 (1810).
Harpyias, Hübner, Verz. bek. Schmett. p. 148 (1818-25).

Forewing elongated, narrow, apex rounded, exterior margin obliquely convex; first subcostal emitted at one-sixth before end of the cell, second from the end, quadrifid; cell extending nearly two-thirds the wing; discocellular inwardly oblique, slightly bent close to subcostal in the middle, upper radial from the upper angle, sometimes joined or looped to base of second subcostal, and lower radial from the middle angle; a slender forked discoidal veinlet emitted within the cell from middle of the discocellular; three median branches, middle branch from close to end of the cell, lower at one-third before the end; submedian curved downward: hindwing small, exterior margin obliquely convex; costal vein extending to apex; subcostal arched in the middle, two subcostal branches on a long footstalk four-fifths beyond the cell; discocellular outwardly oblique, radial from the middle; cell broad, extending to half the wing, a slender forked veinlet emitted within the cell; two upper medians from angle at end of the cell, lower at one-fifth before the end; submedian and internal vein slightly curved. Thorax, head, palpi, and legs very laxly pilose, abdomen less pilose; palpi small; antennæ bipectinated to tip, the branches ciliated in male.

Type, *H. furcula*.

HARPYIA KANDYIA (Plate 120, Fig. 1, ♀, 1*a*, larva).

Forewing greyish-white, with a slight pink tinge; some black basal dots and a slender transverse interrupted sinuous line, an oblique antemedial black-bordered sinuous brown band, a medial slender sinuous line, a white-centred lunule at end of the cell, a slender sinuous postmedial line, and two oblique discal more regularly sinuous lines; each line dilated at its costal end; a marginal row of black conical spots, which are situated between the veins and extend across the cilia: hindwing whiter, with pale fuliginous-brown discal and marginal band, and two darker streaks from anal angle; a pale lunule at end of the cell; blackish marginal spots between the veins and across the cilia. Body greyish-white, thorax and legs black spotted; abdomen with blackish dorsal bands and lateral spots; antennæ black, shaft white.

Expanse, ♂ $1\frac{6}{8}$, ♀ $2\frac{1}{8}$ inches.

Larva with fourteen legs, naked, thickened anteriorly, tapering towards the end and terminating in two long anal processes, fourth segment conical, anterior segments depressed in front, head small; two dorsal short processes on anal segment at base of long processes; anal prolegs obsolete. Colour bright green, with a dorsal white-

bordered pink interrupted band; spiracles brown; a brown-bordered white spot on side of ninth segment. Pupa dark red-brown.

"Feeds on Salix." (*Thwaites.*)

This is quite distinct from both *H. Damodara* and *H. liturata.* The latter has the forewing silvery-white, and the marginal ends of the veins black, the spots being only upon the cilia. The former has a black-centred lunule at end of the cell, and a lower series of spots contiguous to the outer submarginal sinuous line, these spots being situated between the veins, and in the female, are partly confluent with the marginal spots.

Genus STAUROPUS.

Stauropus, Germar, Prod. p. 45 (1811); Stephens, Ill. Brit. Ent. Haust. ii. p. 21; Walker, Catal. Lep. Het. B. M. v. p. 1019.

Terasion, Hübner, Verz. bek. Schmett. p. 147 (1818-25).

Forewing long, narrow; costa arched towards the end, exterior margin very oblique; first subcostal emitted at one-fifth before end of the cell, second from the end, quadrifid; cell narrow, extending more than half the wing, discocellular recurved, inwardly oblique, emitting a slender bifid veinlet within the cell; upper radial from end of the cell in a line with subcostal, lower radial from middle of discocellular; three median branches, middle branch from near end of the cell, lower at one-third before the end; submedian recurved: hindwing short; apex somewhat pointed, exterior margin slightly angular in middle; costal vein arched at the base, extending to apex; subcostal arched in the middle of cell, where it slightly touches the costal; two subcostal branches on a footstalk at one-third beyond the cell; discocellular outwardly oblique, emitting a slender discoidal veinlet within the cell; cell wide; radial from near middle of the discocellular; three median branches, middle branch from near end of the cell, lower at one-third before the end; submedian and internal vein slightly recurved. Wings beneath clothed at the base with longish hairy scales. Body moderately stout, pilose, abdomen extending beyond hindwings; head and base of antennæ tufted; palpi porrect, small, pilose beneath; antennæ broadly bipectinated to two-thirds, the branches plumose, serrated at end; femora and tibia densely pilose.

STAUROPUS ALTERNUS (Plate 119, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Stauropus alternus, Walker, Catal. Lep. Het. B. M. v. p. 1020 (1855).

Pale vinous greyish-brown, sparsely flecked with ferruginous scales; cilia grey: forewing with a curved discal series of grey-bordered ferruginous spots composed of raised scales; a similar marginal lunular line, and a lunule at end of the cell: hindwing with a marginal grey-bordered ferruginous lunular line; two short anterior pale waved-streaks before the apex.

Expanse, ♂ 2, ♀ 2⅜ inches.

Larva purplish-black, naked; two dorsal conical protuberances on fifth to ninth segment, subanal segment tumid; two angular processes from anal segment; anal prolegs obsolete; head large; second and third pair of forelegs long; anal segments carried erect. Cocoon silky, ferruginous. Pupa purplish-black.

"Feeds on Cassia fistula." (*Thwaites.*)

Subfamily NOTODONTINÆ.

Larva with sixteen legs, elongated, naked, attenuated anteriorly, generally with a single or double conical dorsal prominence on twelfth segment; or subpilose, with a dorsal prominence on fifth and twelfth segment, or with several dorsal prominences. Cocoon of a slight texture.

Genus NETRIA.

Netria, Walker, Catal. Lep. Het. B. M. vi. p. 1504 (1855).

Forewing elongated, narrow; costa regularly arched, apex pointed, exterior margin oblique, slightly convex; clothed beneath with longish hairs from the costa; first subcostal emitted at one-eighth before end of the cell, second from end of the cell, quadrifid; cell wide, extending half length of the wing: discocellulars bent outward in the middle, concave at each end; apparently a very slender forked discoidal veinlet emitted within the cell; upper radial from end of cell in a line with subcostal, lower radial from middle of discocellular; three median branches, upper branch from end of cell, middle from about one-eighth, and lower at one-third before the end; submedian much curved downward from its base: hindwing short, broad, clothed from the base with hairy scales; apex convex; costal and subcostal vein joined from their base to half length of the cell, costal vein thence extending to apex; two subcostal branches on a footstalk one-fourth beyond the cell; cell extending nearly half length of the wing at its upper end and to nearly two-thirds at its lower end; apparently a very slender discoidal veinlet emitted within the cell; discocellular very oblique, slightly concave; radial from about one-third before its upper end; three median branches, upper from acute angle at end of the cell, middle branch at one-half and lower at one-third before the end; submedian and internal vein nearly straight. Body large, pilose, abdomen extending beyond hindwings; thorax and head crested above; palpi porrect, extending slightly beyond the head, somewhat clavate, second joint compactly clothed, long, third joint minute, conical; femora and tibia densely pilose; antennæ broadly bipectinated to near tip in male, less so in female.

NETRIA VIRIDESCENS (Plate 120, Fig. 2, ♂, 2*a*, larva).

Netria viridescens, Walker, Catal. Lep. Het. B. M. vi. p. 1504 (1855); Moore, Catal. Lep. Mus. E. I. C. ii. p. 372, pl. 11*a*, fig. 3.

Forewing dull greenish-brown, crossed by two black basal bluntly-sinuous lines,

two inwardly oblique antemedial lines and three postmedial lines, the medial area between the inner and outer lines being darker coloured; a marginal slender sinuous line: hindwing brown, palest at the base. Body brown, thorax and abdominal segments fringed with greenish-brown; front of head, palpi, and legs greyish-brown.

Expanse $1\frac{3}{4}$ to 3 inches.

Larva naked, somewhat thickened in the middle; head large; anal segment bifid. Colour green, with a dorsal purple line, oblique subdorsal indistinct whitish streaks; spiracles white; a sublateral yellow line; cheeks, forelegs, and middle claspers purple. Pupa purplish-black.

"Feeds on Sapotaceæ." (*Thwaites.*)

Genus ANTHEUA.

Antheua, Walker, Catal. Lep. Het. B. M. iii. p. 687 (1855).

Forewing elongated, triangular; first subcostal emitted at one-third before end of the cell, second from close to the end, trifid, the third from beyond half its length, fifth from end of the cell and joined to second by a short spur at two-thirds from its base; cell extending beyond half the wing; discocellular concave, bent in the middle; upper radial emitted from fifth subcostal at some distance beyond its base, lower radial from angle in middle of discocellular; middle median at a short distance before end of the cell, lower at one-third before the end; submedian slightly recurved: hindwing short; costal vein recurved, extending to apex; subcostal running close to costal to end of the cell, two subcostal branches on a footstalk at one-third beyond end of the cell; discocellular obliquely concave, radial from the middle; two upper medians from angles at end of the cell, lower at nearly one-third before the end; submedian and internal vein nearly straight. Body stout, thorax woolly, abdomen extending beyond hindwings, apex tufted in male; palpi short, porrect, pilose; proboscis exserted; antennæ bipectinated, the branches short and ciliated; legs densely pilose, hind tibiæ with four spurs.

ANTHEUA EXANTHEMATA (Plate 104, Fig. 2, ♀).

Forewing deep ochreous-yellow, flecked with purple-brown scales; a triangular discal patch of purple-brown scales below end of the cell; a suffused narrow marginal band and the cilia purple-brown: hindwing in both sexes ochreous purplish-brown, darkest in the female; cilia in male ochreous. Body deep ochreous-yellow; thorax purplish-brown, abdomen with two lateral rows of black spots; palpi, antennæ, and legs purplish-brown.

Expanse, ♂ $1\frac{4}{8}$, ♀ $1\frac{5}{8}$ inch.

Differs from *A. servula* in the forewing being of a much darker ochreous colour and more distinctly flecked with purple-brown scales; the hindwing also, in both sexes, is much darker coloured.

Genus CEIRA.

Ceira, Walker, Catal. Lep. Het. B. M. xxxii. p. 462 (1865).

Forewing long, narrow, exterior margin oblique; first subcostal emitted at one-third before end of the cell, second from close to the end, trifid, third at half-length from its base, fifth from end of the cell, extending close to second and slightly touching base of third; cell long; discocellular concave; upper radial from end of the cell, lower radial from middle of discocellular; three median branches, middle branch from close to end of the cell, lower at nearly one-third before the end; submedian slightly curved: hindwing somewhat long, exterior margin very oblique and convex; costal vein extending to apex; two subcostals emitted from a footstalk at one-third beyond end of the cell; the cell short, not extending to half the wing; discocellular obliquely concave, bent in the middle, radial from the angle; three median branches, middle branch from close to end of the cell, lower at nearly one-half before the end; submedian and internal vein straight. Body somewhat slender, abdomen extending half beyond the hindwing, clothed with adpressed hairs, thorax pilose; palpi ascending, pilose beneath, second joint long, extending to a level with vertex, apical joint minute; antennæ very finely bipectinated; proboscis exserted; legs stout, femora and tibia compactly pilose, hind tibiæ thickened and with four long spurs, middle tibiæ with one pair of spurs.

CEIRA METAPHÆA (Plate 119, Fig. 3, ♂).

Ceira metaphæa, Walker, Catal. Lep. Het. B. M. xxxii. p. 462 (1865), ♂.

Male. Pale yellowish-ochreous, sparsely speckled with ochreous-brown scales; with an ochreous-brown speckled longitudinal narrow fascia extending from apex to base of wing, and three short oblique fasciæ below; three or four black-speckled spots from base of costal border, a larger one at end of the cell, and another below the cell; a marginal row of black dots: hindwing ochreous-brown; cilia alternated with brown and ochreous. Thorax yellowish-ochreous; head, palpi, and legs brownish-ochreous; abdomen ochreous-brown, tip pale ochreous.

Expanse $1\frac{3}{4}$ inch.

Genus NOTODONTA?

NOTODONTA EJECTA.

Notodonta ejecta, Walker, Catal. Lep. Het. B. M. xxxii. p. 411 (1865).

"Male. Brown, mostly cinerous beneath: forewings with three black lines; basal line very angular and bent; interior line undulating, turning abruptly inward towards the interior border; exterior line slightly denticulated, much bent outward in front, contiguous to some black streaks, which extend to the exterior border: hindwings whitish-cinereous, brownish about the exterior border; marginal lunules

black, bordered with white; fringe brown. Thorax with some cinereous hairs; abdomen paler; antennæ slightly pectinated, serrated towards the tip, simple at the tip.

"Expanse 18 lines."

Described by Mr. Walker from typical specimens in the collection of Mr. E. L. Layard. The author has not had the opportunity of examining that collection.

Genus PHEOSA?

PHEOSA BASALIS (Plate 121, Fig. 1, ♂, 1*a*, larva).

Forewing with the basal area pale brownish-ochreous, the exterior border olive-brown, the medial area formed by a purple-brown band, the inner border of which is angulated below the cell by a black line and the outer border by a pale line, the band traversed by black streaks; a row of black dots along exterior border: hindwing pale olivaceous-brown, palest at the base; a small black lunular mark at anal angle. Thorax pale brownish-ochreous, abdomen purplish-brown; palpi black.

Expanse $1\frac{1}{2}$ inch.

Larva pale greenish-white above, green below, with pale green oblique lateral lines, a straight narrow grey-bordered yellow dorsal line, and a minute red tubercle on twelfth segment; head black lined; legs green.

Genus SPHETTA.

Sphetta, Walker, Catal. Lep. Het. B. M. xxxii. p. 457 (1865).

Male: forewing elongated, apex pointed, exterior margin slightly convex, posterior margin long; cell long, extending two-thirds the wing, apparently with a very slender forked discoidal veinlet within the cell; first subcostal branch emitted at one-half before end of the cell, second at one-fourth, trifid; fifth from end of the cell, ascending and joined by a short spur to third near its base; discocellular bent at each end, radials from the angles; middle median at one-fifth and lower at two-fifths before end of the cell; submedian recurved: hindwing short, exterior margin oblique and convex; cell short, not extending to half the wing, apparently with a slender discoidal veinlet within the cell; subcostal arched to end of the cell, two subcostal branches on a footstalk one-fifth beyond end of the cell; discocellular concave, radial from the middle; two upper medians from acute angle at end of the cell, lower at one-third before the end; submedian and internal straight. Body moderately stout, abdomen extending beyond hindwings, tufted at apex; palpi slightly ascending and extending to level of vertex, second joint long, laxly squamose beneath, third joint short, somewhat cylindrical; proboscis exserted; antennæ finely bipectinated; legs pilose, hind tibiæ with four spurs.

SPHETTA APICALIS (Plate 121, Fig. 2, ♀, 2a, larva).

Sphetta apicalis, Walker, Catal. Lep. Het. B. M. xxxii. p. 457 (1865), ♂.

Purplish greyish ochreous-brown: forewing crossed by three or four basal dark purple-brown sinuous lines, an antemedial angulated duplex line, three or four oblique lower discal sinuous lines, followed by a submarginal fascia composed of broad lunules, and an outer marginal very slender lunular line; a dark purple-brown fascia curving from middle of the costa to below the apical angle, this fascia enclosing a pale bordered spot in middle of the cell and another at its end: hindwing paler brown. Thorax, head, and legs greyish ochreous-brown, abdomen darker. Female darker coloured, with darker markings than in male.

Expanse, ♂ $1\frac{4}{8}$, ♀ $1\frac{7}{8}$ inch.

Larva greyish-blue above, green below, with a longitudinal waved darker greyish-blue lateral band dividing the two colours; a dorsal row of blunt tubercles from fifth segment, and a subdorsal row of small black spots, one on each segment, the dorsal tubercles and anterior segments with a few short blackish hairs, and a single hair from each segment below the lateral line. Pupa purple-brown.

"Feeds on *Diospyros* and *Nephelium erectum*." (*Thwaites.*)

Genus ICHTHYURA.

Ichthyura, Hübner, Verz. bek. Schmett. p. 162 (1818-25); Walker, Catal. Lep. Het. B. M. v. p. 1054.
Clostera, Hoffmansegg, MS.; Samouelle, Ent. Useful Comp. p. 247 (1819); Stephens, Illust. Brit. Ent. Haust. ii. p. 12 (1828).

Forewing elongated, narrow, costal margin almost straight, exterior margin slightly oblique and convex; first subcostal emitted from close to end of the cell, second from the end, quadrifid; discocellular concave; cell extending more than half length of the wing, apparently with a slender discoidal veinlet emitted within the cell; upper radial from end of the cell, lower radial at one-fourth below the upper; three medians, middle branch from close to end of the cell, lower at about one-third before the end; submedian slightly curved: hindwing short, exterior margin convex; costal vein recurved; subcostal arched near the base, two subcostal branches on a footstalk at one-fifth beyond the cell; discocellular oblique and bent before the middle; apparently with a slender discoidal veinlet emitted within the cell; no radial; three median branches, two upper branches from angles at end of the cell, lower at more than one-third before the end; one submedian and an internal vein. Thorax moderately stout, abdomen long and somewhat slender, tufted in male; palpi porrect, laxly squamose, second joint long, apex minute, conical; antennæ bipectinated to tip; legs and fore tarsi densely pilose.

ICHTHYURA RESTITURA (Plate 122, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Ichthyura restitura, Walker, Catal. Lep. Het. B. M. xxxii. p. 433 (1865).

"Male: purplish ferruginous-brown: forewing with three pale slight brown-bordered undulated lines, two interior and one exterior; two irregular incomplete brown bands, one intersected by the exterior line, the other submarginal and accompanied by some black points: hindwings brownish-red, wings beneath with a single middle brown band. Female rather paler, bands of the forewing almost obsolete, hardly darker than the ground colour. Head above and front of thorax dark brown. Expanse, 11 to 12 lines."

Larva slightly hairy, with a dorsal pinkish tubercle on fifth and on twelfth segment, which are also slightly hairy, and a sublateral row of shorter tubercles; colour purplish-brown or purplish-grey, with several longitudinal black-speckled lines; anterior segments with a subdorsal black spot streaked with ochreous-white; some dorsal ochreous-white dots and two lateral rows of similar dots. Pupa purplish-brown.

"Larva feeds on *Elæocarpus*." (*Thwaites.*)

Genus BEARA.

Beara, Walker, Catal. Lep. Het. B. M. xxxv. p. 1703 (1866).

Wings small: forewing slightly elongated and broad, costa arched at the base, apex acute, exterior margin almost erect, posterior margin long, convex at the angle and near base; costal and subcostal vein wide apart; cell disposed almost in middle of the wing, long, extending two-thirds the length; first subcostal emitted at one-third before end of the cell, second at one-ninth, trifid; fifth from end of the cell, ascending and touching second below the base of third; discocellular bent at each end, concave in middle, radials from upper and lower end; middle median from about one-ninth before end of the cell, lower at one-third before the end; submedian curved downward: hindwing small, short; costal and subcostal touching near their base; cell extending half the wing; two subcostals from end of the cell; discocellular obliquely concave, radial from lower end; two upper medians from a very acute angle at end of the cell, lower at one-third before the end; submedian and internal vein recurved. Body squamose, abdomen of male extending nearly half beyond the hindwing, stout in female; palpi ascending, squamose, second joint long, clavate, third joint cylindrical; antennæ bipectinate in male; proboscis exserted; legs squamose, femora slightly pilose beneath, hind tibiæ with two pairs of long spurs.

BEARA DICHROMELLA (Plate 123, Fig. 2, 2*a*, ♂ ♀).

Beara dichromella, Walker, Catal. Lep. Het. B. M. xxxv. p. 1703 (1866).

Forewing purplish-red, very indistinctly crossed by a subbasal, an antemedial,

and a postmedial blackish waved line, a submarginal and a marginal row of black spots; a black spot in middle of the cell and a lunule at the end: hindwing whitish, with slight red suffused apical border, and a marginal row of minute black dots. Thorax purplish-red, abdomen paler; palpi, abdomen, and legs beneath whitish.

Expanse $\frac{8}{10}$ to 1 inch.

Larva pale purple, with a purple-red dorsal tubercle on sixth and another on twelfth segment; anterior segments with minute black-bordered white tubercular spots, and two lateral rows of similar spots on all the segments, from each of these and the dorsal tubercles project short fine whitish hairs; a dorsal yellow band from anterior to posterior tubercle. Cocoon pale purplish-red, attached by a silken peduncle to a leaf or twig, truncated and with a conical projection at one end.

"Feeds on *Celtis orientalis*."

Subfamily CAREINÆ.

Larva with sixteen feet, naked; anterior segments tumid; with a dorsal prominence on the twelfth segment.

Genus CAREA.

Carea, Walker, Catal. Lep. Het. B. M. x. p. 475 (1856).
Chora, Walker, Journ. Linn. Soc. Zool. vi. p. 188 (1862).

Forewing slightly elongated, costa arched at the base, apex pointed, exterior margin convex, posterior angle pointed, posterior margin convex at base; first subcostal emitted at nearly half before end of the cell, second at one-sixth, bifid, third at one-fourth from its base; fourth from end of the cell, ascending and joining third for a short distance, fifth from near its base below the junction with third; discocellular slender, concave; upper radial from end of cell in a line with subcostal, lower radial from near lower end of discocellular; middle median from near end of the cell, lower median at one-fourth before the end; submedian recurved: hindwing short, broad, exterior margin very convex; costal and subcostal touching near their base; two subcostals from end of the cell; discocellular deeply concave, oblique; radial from near its lower end; two upper medians from acute angle at end of the cell, lower at one-sixth before the end; submedian and internal vein straight. Body compactly clothed, abdomen extending beyond hindwing; palpi porrect, squamose, second joint long, third minute, conical; antennæ ciliated in male; legs thickly pilose, middle and hind tibæ tumid, hind tibæ with four spurs.

CAREA VARIPES (Plate 123, Fig. 1, ♀, 1*a*, larva).

Carea varipes, Walker, Catal. Lep. Het. B. M. x. p. 475 (1856).
Chora curvifera, Walker, Journ. Linn. Soc. Zool. vi. p. 188 (1862).
Dabarita rhodophila, Walker, Catal. Lep. Het. B. M. xxxiii. p. 718 (1865), ♀.

Male and female. Ferruginous-red: forewing with a few scattered minute black

scales which are most numerous on the exterior border; a transverse duplex black line, with lilac-white centre, curving from the costa near the apex to posterior angle, the outer ends of the line bordered with a few white scales; two small black-speckled spots in middle of the cell and one at its end: hindwing pale along costal border. Palpi and legs above dark ferruginous; pectus and legs beneath white; abdomen pale ferruginous at the base, with a blackish anal tuft.

Expanse $1\frac{5}{8}$ inch.

Larva with the second, third, and fourth segments extremely tumid, and an elongated conical tubercle on twelfth segment; head small. Colour purplish olive-brown, or greenish olive-brown above, green beneath, with a purplish-white lateral band from fourth to last segment; head red. Cocoon compact, bluntly oval, with a conical point projecting from one end. Pupa purplish olive-brown.

"Feeds on Eugenia xanthocarpa." (*Thwaites.*)

Genus DABARITA.

Dabarita, Walker, Catal. Lep. Het. B. M. x. p. 478 (1856).

Closely allied to Carea. Forewing more produced and slightly falcated at the tip, exterior margin very irregular and angular in the middle. Venation similar. Palpi smaller, laxly squamose.

DABARITA SUBTILIS (Plate 123, Fig. 3, 3*a*, ♂ ♀).

Dabarita subtilis, Walker, Catal. Lep. Het. B. M. x. p. 479 (1856).

Forewing varying from greyish-ferruginous to ferruginous-red, with a few scattered brown or black scales; a more or less distinct outwardly oblique antemedial brown or black speckled line, and a postmedial duplex line, both lines sometimes more thickly and darker speckled at posterior end; an indistinct blackish dot in the cell and one at its end: hindwing paler, somewhat whitish at the base. Palpi at the base, pectus, and legs beneath white; abdomen palest at the sides.

Expanse $1\frac{3}{8}$ to $1\frac{4}{8}$ inch.

Larva similar to that of *Carea varipes.*

Genus BRADA.

Brada, Walker, Catal. Lep. Het. Brit. Mus. xv. p. 1665 (1858).
Phanaca, Walker, *id.* xxxiii. p. 856 (1865).

Forewing elongated, somewhat fusiform; costal and subcostal veins wide apart; first subcostal emitted beyond one-third before end of the cell, second at one-eighth, bifid, fourth from end of the cell and joining third for a short distance, fifth from below its junction with the third; cell narrow, disposed towards middle of the wing; discocellular concave, upper radial emitted from above base of fourth subcostal, lower radial from lower end of discocellular; middle median from close to end of

the cell, lower at one-third before the end; submedian almost straight: hindwing rather long, narrow; costal and subcostal vein touching near their base; cell short; two subcostal branches from end of the cell; discocellular concave, inwardly oblique, radial from its lower end; two upper medians from a footstalk beyond end of the cell, lower at one-fourth before the end; submedian and internal vein slightly recurved. Body stout, abdomen extending beyond hindwings; palpi ascending, squamose, second joint long, third joint one-fourth its length, conical; proboscis exserted; antennæ of male with short ciliæ; legs compactly pilose, hind tibiæ with four spurs.

BRADA TRUNCATA (PLATE 122, FIG. 2, 2*a*, ♂ ♀, 2*b*, larva).

Brada truncata, Walker, Catal. Lep. Het. B. M. xv. p. 1666 (1858), ♂.
Phanaca damnipennis, Walker, *id.* xxxiii. p. 857 (1865), ♂.

Dark ferruginous-brown. Male: forewing with a blackish outwardly oblique antemedial pale bordered line and a slightly convex postmedial line, an indistinct black spot at end of the cell: hindwing dusky brown, paler at the base. Thorax, head, palpi and legs above dark ferruginous-brown, abdomen dusky brown above, whitish beneath, legs white beneath. Female: forewing with the transverse lines not pale bordered, the outer line more convex: hindwing paler than in male.

Expanse, ♂ $1\frac{3}{8}$, ♀ $1\frac{4}{8}$ inch.

Larva with the second, third, and fourth anterior segments tumid; head small; two short pointed dorsal tubercles on twelfth segment. Colour reddish-brown, anterior segments somewhat olive-brown, with a paler centred double lunular black dorsal line ending in a black band to anal segment; anterior segments with black dorsal spots and streaks; a pale centred black lateral double line. Cocoon compact, with a projected conical end; pale reddish-brown. Pupa reddish-brown.

Family DREPANULIDÆ.

Wings broad: forewing generally falcate at the tip; antennæ pectinated or bipectinated in male, less so or simple in female.

Larva with fourteen legs, anal prolegs obsolete, anal segment with a lengthened projected process; with one or several small dorsal prominences.

Genus ORETA.

Oreta, Walker, Catal. Lep. Het. B. M. v. p. 1166 (1855).

Forewing short, triangular, falcate at the apex; cell narrow, extending beyond half the wing, apparently with a very slender discoidal veinlet emitted within the cell; first subcostal emitted from close to end of the cell, quadrifid, second at a short distance from below its base and terminating on costa before the apex, third from

below second near the end, fourth at half distance from below third and terminating at the apex, fifth from end of the cell, running very close alongside second, bent opposite base of fourth, and terminating below apex; discocellular deeply concave, radial from upper end in a line with subcostal; two upper medians from angles at end of the cell, second at one-fifth, and first at half before end of the cell; submedian almost straight: hindwing short, broad, exterior margin oblique, abdominal margin long; cell broad, apparently with a very slender discoidal veinlet emitted within the cell; costal vein much arched at the base, recurved to apex; subcostal arched, first branch emitted at one-third before end of the cell; discocellular outwardly oblique, bent in the middle; two upper medians from acute angle at end of the cell, second at one-fifth, and first at half before end of the cell; submedian slightly recurved; no internal vein. Body short, stout, thorax compactly pilose; palpi very small; antennæ thick, flattened, pectinated, the branches short, thick and almost joined together; legs pilose, hind tibiæ with two short spurs.

ORETA EXTENSA (Plate 124, Fig. 3, 3*a*, ♂ ♀).

Oreta extensa, Walker, Catal. Lep. Het. B. M. v. p. 1166 (1855), ♂; Moore, Catal. Lep. Mus. E. I. C. ii. p. 370, pl. 11*a*, fig. 2, ♀, pl. 18, fig. 3, larva.

Oreta suffusa, Walker, Catal. Lep. Het. B. M. v. p. 1167, ♂.

Ochreous-yellow: forewing with some indistinct dull ferruginous transverse strigæ, a dull ferruginous oblique medial and an outer fascia, the division being by a narrow line extending from the apex, the inner margin of the medial fascia irregular; some black and grey speckles at the posterior angle: hindwing with several dull ferruginous speckles, which are disposed somewhat in transverse rows; a basal and an apical dull ferruginous blotchy fascia. Antennæ, palpi, and legs above dull ferruginous.

Expanse, ♂ $1\frac{1}{2}$, ♀ $1\frac{3}{4}$ inch.

Genus TELDENIA.

Wings small: forewing rather short, triangular, costa arched, apex pointed; first and second subcostals emitted close together at nearly half before end of the cell, second bifid at half its length, fourth from end of the cell and touching third above its base, fifth from below its juncture with the third; discocellular obliquely concave; radial from fourth subcostal beyond end of the cell; two upper medians from angles at end of the cell, second at one-third, and first at two-thirds before end of the cell; submedian straight: hindwing short, broad; exterior margin almost angular in middle, abdominal margin long; costal vein very convex at the base; subcostal arched at base, first subcostal at one-half before end of the cell, curving upward towards costal; discocellular outwardly oblique; two upper medians from angles at end of the cell, second at one-fourth and first at half before end of the

cell; submedian slightly curved; apparently, no internal vein. Body short; palpi small, slender, porrect; legs slender, squamose; middle and hind tibia with two spurs; antennæ in male bipectinated to near the tip, simple in female.

TELDENIA ALBA (Plate 124, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Greyish-white. Male: both wings with a transverse discal zigzag band, composed of purplish lunules with black-speckled inner borders; beyond the lunular band is a very indistinct pale purplish-brown lunular line, and a marginal row of black dots. Female. The discal lunular band with a confluent purplish-brown line, outer line and marginal black dots more distinct. Antennæ, front of head, and legs above purplish-brown.

Expanse, ♂ $\frac{7}{8}$, ♀ 1 inch.

Larva with fourteen legs; a dorsal tubercle on anterior and twelfth segment; a slender dorsal process on fourth segment, and a lengthened process projecting from anal segment; head cleft above. Colour green, with subdorsal rows of purple spots and a lateral row of black spots; head purple. Pupa green, black striped.

"Feeds on Eugenia firma." (*Thwaites.*)

Genus DREPANA?

DREPANA SPECULARIS (Plate 124, Fig. 2).

Drepana specularis, Moore, Proc. Zool. Soc. 1879, p. 407.

Female. Upperside pale ochreous-brown: forewing with the veins externally and a transverse submarginal oblique narrow band pale testaceous-yellow; a dark-bordered paler blotch at base, below and beyond the cell, the rest of the wing numerously covered with short pale strigæ; a narrow dusky lunule at end of the cell; a marginal row of small black-speckled spots: hindwing pale ochreous-yellow anteriorly, dark brown posteriorly and lined with pale veins and traversed by short pale strigæ; a narrow pale band crossing the disc, outside which are two medial oval contiguous semidiaphanous pale spots; a marginal row of black-speckled spots. Underside black speckled; transverse band on both wings black and broader; marginal speckled spots confluent on hindwing. Shaft of antennæ white, pectinations and legs brown.

Expanse $2\frac{1}{2}$ inches.

Genus COBANILLA.

Forewing triangular, arched towards the end, apex slightly falcate, exterior margin convex posteriorly; first subcostal branch emitted at one-eighth before end of the cell, second close to its end, bifid at half its length, fourth from end of the cell, bifid, and joining third for a short distance above its base, fifth from below its junction with the third; discocellular bent outward near upper end and inward in

the middle; cell extending two-thirds the wing, very broad at its end; radial from upper angle of discocellular; apparently a slender discoidal veinlet emitted within the cell; upper median from angle above end of the cell, third at a short distance below the upper, second at one-seventh, and first or lower at nearly half before end of the cell; submedian slightly curved: hindwing very convex at the apex; costal vein bowed at the base, thence straight to apex; subcostal curved and touching costal near the base; cell long, extending two-thirds the wing; two subcostals from end of the cell; discocellular bent acutely in the middle; apparently a slender veinlet emitted within the cell; four median veins, upper median from angle above end of the cell, second at one-sixth, and first at nearly half before end of the cell; submedian and internal vein curved. Body short; palpi small, apex minute; antennæ bipectinated, the branches ciliated; forelegs compactly pilose, hind tibiæ with four spurs.

COBANILLA MARGINATA (Plate 124, Fig. 4).

Wings pale glossy ferruginous-yellow: forewing darkest exteriorly, the costal and exterior borders and cilia ferruginous-red; a slight reddish lunule at end of the cell: hindwing ferruginous-red along exterior border and cilia. Body whitish; antennæ yellowish, shaft white; front of the head, palpi, and legs above pale ferruginous.

Expanse $1\frac{2}{12}$ inch. In Coll. F. Moore.

Family SATURNIIDÆ.

Wings very large and broad; forewing falcate or rounded at the tip, generally with an ocellus of varied size and form and more or less vitreous. In some genera the hindwing is anally produced into a long tail. Antennæ very broadly bipectinated in male, with the branches in pairs, less so in the female; proboscis short or obsolete; abdomen very large and stout in female.

Larva either with rows of short tubercles surmounted with short divergent hairs, the segments in some genera being also slightly hairy between the tubercles, the tubercles sometimes on the anterior and anal segment mounted on a conical prominence; or with rows of short or long fleshy spines. In repose, the anterior segments are contracted and held upward.

Cocoon large, of a fine or coarse but firm silken texture, either oval, lengthened oval, or pyriform, attached to a twig by a silken peduncle, or to pendent leaves by silken threads.

Genus ANTHERÆA.

Antheræa, Hübner, Verz. bek. Schmett. p. 152 (1818-25).

Wings large, with a rounded vitreous ocellus at end of the cell. Male: forewing triangular, costa much curved at the end, apex falcate, exterior margin very oblique; cell long, broadest before the end; costal vein extending nearly to the apex; first subcostal trifid, emitted at one-fourth before end of the cell, second from

near base of the first, both running close together towards their end and terminating at the apex, third from below second at nearly one-fourth from its base, fourth at two-thirds between the base of first and end of the cell, fifth from end of the cell; discocellular slightly concave; three median branches, median vein curved upward to subcostal at its base, middle median emitted at about one-sixth, and lower at nearly two-thirds before end of the cell; submedian recurved, with a short lower basal loop and projecting spur: hindwing short, broad, exterior margin very oblique, convex; costal vein arched from the base, extending to apex; cell broadest in the middle, extending nearly two-thirds the wing; subcostal widely separated from the costal; three subcostal branches, first at nearly half before end of the cell, second at one-sixth before the end; discocellular slightly concave; three median branches, middle branch at one-sixth and lower at nearly half before end of the cell; submedian vein slightly curved at base. Body large, stout; palpi short; antennæ very broadly bipectinated to near the tip, the branches in pairs and ciliated; legs short, thick, densely pilose.

ANTHERÆA CINGALESA (Plate 125, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Male. Deep yellowish-ochreous, or reddish-ochreous; ocelli round, with black outer ring, purplish inner border and white line: forewing paler ochreous at the apex, which is speckled with purplish-white scales; costal border hoary; a very indistinct darker ochreous shade crossing the disc through the ocellus, and a similar outer lunular shade; a slender slightly grey-bordered purple-brown streak crossing base of the cell, and a waved similar subbasal streak beneath; a submarginal purple-brown line bordered by a slight purplish-white lunular outer line; the outer margin of the wing slightly olivaceous: hindwing with a subbasal transverse indistinct purple-brown waved streak, a very indistinct darker ochreous shade crossing the disc through the cell, and an outer discal similar lunular shade, followed by a purple-brown submarginal lunular line with a very slight purplish-white outer border. Female deep yellowish-ochreous; the ocelli larger, the subbasal streaks and submarginal purple line prominent, the latter with broad purplish-white outer border. Front of thorax, and collar, hoary; front of head, palpi, and legs ochreous.

Expanse, 5¾ to 6¾ inches. In Coll. F. Moore.

Adult larva with two dorsal rows of yellow tubercular prominences, from which radiate a few short hairs; colour green, with a yellow lateral band ending in a dilated brown band on anal segment; a lateral purple-bordered pearly-white lunate spot on sixth and seventh segment; spiracles yellow, below which is a row of black dots; head small; head and forelegs purple-brown. Cocoon oval, hard, brownish-grey, attached to a twig by a short coarse silken peduncle.

"Feeds on *Terminalia*." (*Thwaites.*)

Genus ACTIAS.

Actias, Leach, Zool. Misc. ii. p. 25 (1815).
Tropæa, Hübner, Verz. bek. Schmett. p. 152 (1818-25); Walker, Catal. Lep. Het. B. M. vi. p. 1259.
Plectropteron, Hutton, Trans. Ent. Soc. v. p. 45 (1847).

Wings ample, each with a small rounded ocellus at end of the cell. Forewing triangular, costa much arched towards the end, apex pointed and slightly falcate in the male, exterior margin very oblique, posterior margin short; cell extending to nearly half length of the wing, somewhat clavate in form; first subcostal emitted at one-third before end of the cell, trifid, second starting at one-third before the apex, third from below the first at about one-third from its base, fourth at one-sixth before end of the cell; discocellular inwardly oblique, slender; median vein arched close to subcostal at its base, middle branch at one-third and second at two-thirds before end of the cell; submedian slightly recurved, with a lower basal loop and short straight spur from the loop: hindwing triangular, with a lengthened tail from anal angle; costal margin slightly arched, apex somewhat acute in male; cell extending to two-thirds the wing; first subcostal emitted at three-fourths and second at one-half before end of the cell; discocellular oblique, slender; middle median branch at one-fifth and first or lower at one-third before end of the cell, the three medians extending to end of the tail; submedian also extending to near end of the tail. Body short, very woolly; palpi small; antennæ in male deeply bipectinated, the branches in pairs of equal length, slender, ciliated, in female the branches are stouter and alternately long and short, the long branches being subclavate; femora woolly beneath.

ACTIAS SELENE (Plate 126, Fig. 1, ♂, 1*a*, larva).

Echidna Caudata Selene, Hübner, Samml. Exot. Schmett. i. pl. 172, 3, 4 (1806-19).
Actias Selene (McLeay) Leach, Zool. Misc. ii. p. 26, pl. 70 (1815); Moore, Catal. Lep. Mus. E. I. C. ii. p. 400, pl. 19, fig. 3, 3*a*.
Tropæa Selene, Hübner, Verz. bek. Schmett. p. 152 (1818-25); Walker, Catal. Lep. Het. B. M. vi. p. 1262.
Plectropteron Dianæ, Hutton, Trans. Ent. Soc. v. p. 45 (1847).
Phal. Att. Luna, Cramer, Pap. Exot. i. pl. 31, f. A, B (*nec* Drury).

Pale grey bluish-green: forewing with a dark purple-brown costal band, the extreme edge of which is much the palest; crossed by a slender subbasal very indistinct darker green fascia, and two discal similar fasciæ: hindwing with a single discal similar fascia; the tail suffused with pink across the middle. Both wings with a small rounded ocellus, which is pale pink, bordered by a yellowish line, crossed by a slender semitransparent discocellular streak and traversed by an inner white-streaked black band. Body whitish; thorax with a purple-brown collar and a band in front; antennæ yellow; legs above purple-brown.

Expanse $5\frac{1}{2}$ to $6\frac{1}{2}$ inches.

Adult larva apple-green, of a semitransparent hue; each segment except the anal with two dorsal and a sublateral spiney yellow tubercle, the tubercles also sparsely hairy, the hairs black; the back, sides, and beneath, as well as the legs, with a few very fine hairs, those on the back yellow, the others black; on the anterior segments is a smaller subdorsal and lower sublateral tubercle; the dorsal tubercles on third and fourth segments golden-yellow, with a black band. Head, forelegs, and pad of anal legs rufous-brown. Cocoon large, of an irregular ovate shape, formed of coarse pale rusty brown silk closely interwoven; enclosed among the leaves of the tree.

"Feeds on Odina Wodier." (*Dr. Thwaites.*)

Genus ATTACUS.

Attacus, Linnæus, Syst. Nat. 1, 2, p. 108 (1767); Hübner, Verz. bek. Schmett. p. 155; Walker, Catal. Lep. Het. B. M. v. p. 1200.

Wings very large, each with a large hyaline more or less irregular triangular spot: forewing triangular; costa much arched, apex lengthened, convex and falcate, exterior margin oblique, posterior angle rounded; cell short, broad, open; subcostal with five branches, first emitted at one-half between base and fourth, second near to first, bifid, the third starting from below at a short distance from its base; median recurved, arched at its base, three-branched, lower branch at half distance between the base and second; submedian with a short veinlet from below the base: hindwing broad, apex rounded, exterior margin and anal angle convex; cell short, broad, open; costal vein arched; subcostal three-branched, first at two-thirds between the base and third; median three-branched, first at two-thirds between the base and third; submedian recurved. Body stout, short, woolly; palpi very short, thick; antennæ large, broadly bipectinated, the branches ciliated; legs short, thick.

ATTACUS TAPROBANIS (Plate 127, Fig. 1, ♂, 1*a*, larva).

Purplish-ferruginous, basal and discal areas grey and black speckled, the discal area also speckled with olive-yellow scales. Both wings with a black-bordered hyaline white central triangular spot, that on the forewing elongated and with pointed angles, that on the hindwing broad and with rounded inner angles. Forewing crossed by an antemedial and a postmedial red and black bordered white band, the former angulated on the median vein, the latter recurved and somewhat lunular; above the central hyaline spot is a small slender similar streak which extends to or crosses the outer white band; the costal margin is grey and black speckled, and terminates in a black subapical spot, below which is a slender purple-red streak and a white-speckled sinuous line, the apex being paler and suffused with red and olive-yellow, below which the marginal border is more or less ochreous olive-brown, and is traversed by a slender black waved line: hindwing crossed by a similar coloured

subbasal band, which curves upward to the costa and returns across the disc to above anal angle; the marginal border is ochreous olive-brown, traversed by a waved black line and an inner broken chain-like row of small blackish or purple-red spots. Body purplish-ferruginous, with white and dark grey abdominal bands above, and pale-bordered purple spots below; legs hoary; antennæ ochreous-yellow.

Expanse $6\frac{1}{2}$ to 9 inches. In Coll. F. Moore.

Note.—The larger specimens are of a uniformly paler colour.

Larva. Adult. Green, with pale brownish speckles. Head small; second, third, and fourth segments with a dorsal conical prominence; fifth to twelfth segments with long blunt fleshy bluish-green dorsal and subdorsal spines, which project backward; a lateral blue-black slender spine on second to sixth segment, and a sublateral row of similar spines from second to twelfth segment, both rows being projected forward; spiracles blue-green; on anal segment is a red oval ring above the clasper; middle claspers black. Cocoon large, lengthened, pyriform; of a fine silken texture, pale greyish-brown, attached to a twig by a silken peduncle amongst the leaves.

"Feeds on Cinnamon and other trees." (*Dr. Thwaites.*)

"Very common in the gardens about Colombo." (*Tennant.*)

Family LIMACODIDÆ.

Wings short and broad. Antennæ simple or nearly so in both sexes, or bipectinated to about one-third the length, in some genera bipectinated throughout in the male and simple in the female; proboscis obsolete.

Larva limaciform or onisciform, oblong, convex above; with fleshy protuberances of various size, arranged along the back and sides, rarely more lengthened anteriorly and posteriorly, and crested with short spinous hairs. In some genera these protuberances are limited to the sides, in others the surface is entirely naked; anterior legs small, others mostly rudimentary. Cocoon oval or round, of a firm cartilaginous texture throughout, sometimes with a slight silken outer covering; attached to the leaves or bark. Imago escapes through a circular opening cut out at one end.

Genus SCOPELODES.

Scopelodes, Westwood, Duncan's Nat. Library, vol. xxxvii. p. 222 (1841); Walker, Catal. Lep. Het. B. M. p. 1104.

Wings somewhat large, broad. Male: forewing clothed with short, thick, somewhat raised scales; costa almost straight, exterior margin oblique, posterior margin rounded; cell long, narrow; subcostal vein five-branched, first emitted at one-fifth before end of the cell, second from the end, third in a direct line from end

of the cell, trifid; discocellulars bent acutely in the middle, emitting a discoidal veinlet within the cell from the angle; upper radial from middle of upper discocellular, lower radial from a slight angle above lower end of the cell; three median branches, first or lower emitted at nearly one-fourth and second at one-seventh before end of the cell; submedian curved upward towards median, an internal vein with a lower branchlet at one-third from the base: hindwing oval, broad; costa arched; subcostal joined to the costal at its base; subcostal two-branched, the branches on a footstalk one-fourth beyond end of the cell; discocellulars bent acutely inward in the middle, emitting a discoidal veinlet within the cell from the angle; radial from lower discocellular above end of the cell; three median branches, first at one-third, and middle branch at one-seventh before end of the cell; a submedian and two internal veins at equal distances apart. Body stout; coarsely clothed; palpi porrect, first joint short, second joint squamose, long, extending half its length beyond the head, third joint longer than second, projected upward, pilose, the hairs projecting forward in the form of a brush tufted at the tip; antennæ closely bipectinated, the branches longest from the base and minute at the tip; legs stout, long, pilose, tibiæ and tarsi laterally fringed; hind tibiæ with four spurs. Female. Wings broader; venation the same; palpi longer and more laxly pilose; antennæ simple.

Type, *S. unicolor*.

SCOPELODES AUROGRISEA (Plate 128, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Male. Forewing ochreous-brown, grey speckled: hindwing ochreous, with a dusky grey-brown marginal border, which is intersected by pale veins. Thorax and head ochreous-brown, grey speckled; abdomen ochreous, with black segmental dorsal streaks and tip; palpi reddish-ochreous; legs hoary, hind tarsi with black tip. Female. Forewing brownish-ochreous; hindwing paler, with dusky grey-brown marginal border; thorax and abdomen ochreous.

Expanse, ♂ 2, ♀ 3 inches. In Coll. F. Moore.

Larva limaciform, green above, yellowish beneath. Adult with two rows of large broad densely spinous tubercles; a tricoloured—red, white, and blue—transverse dorsal stripe on (apparently) the ninth segment, and a black spot on anal segment. Cocoon bluntly oval, purple-brown.

"Larva nearly omnivorous; on Coffea, Rosa, &c." (*Dr. Thwaites.*)

Genus PARASA.

Neæra,* H. Schæffer, Lep. Exot. i. fig. 176 (1854); Walker, Catal. Lep. Het. B. M. v. p. 1138 (1855).
Parasa, Moore, Catal. Lep. Mus. E. I. C. ii. p. 413 (1858-9).
Letois, Felder, Novara Reise, Lep. iv. pl. 82, f. 15 (1867-74).

Wings small, broad: forewing with nearly straight costa, apex rounded,

* Preoccupied in 1830 for a genus of Diptera.

exterior margin oblique, posterior angle convex; first subcostal emitted at one-third and second from close to end of the cell, third from the end, trifid; discocellulars bent very acutely inward in the middle, emitting a discoidal veinlet within the cell; upper radial from middle of upper discocellular, lower radial from lower discocellular above end of the cell; lower median at one-third and middle median at one-sixth before end of the cell; submedian running close to median, internal vein with a lower branch at one-third from its base: hindwing short; subcostal bent upward near base and slightly touching the costal, two subcostal branches on a footstalk at one-fifth beyond end of the cell; upper discocellular short, lower long, extending outward; a discoidal veinlet emitted from angle within the cell; radial from near middle of lower discocellular; lower median emitted at two-fifths and middle median at one-fifth before end of the cell; a submedian and two internal veins. Body stout, thorax thick; palpi porrect, densely pilose, extending slightly beyond the head, laterally thickened and pointed in front; legs thick, pilose, tibiæ and base of tarsi laterally fringed; antennæ in male closely bipectinated to about one-third from the base, thence serrated to tip; antennæ simple in female.

Type, *P. lepida.*

PARASA LEPIDA (PLATE 128, FIG. 2, *2a*, ♂ ♀, *2b*, larva).

Phal. Noct. lepida, Cramer, Pap. Exot. ii. pl. 130, fig. E (1779).
Parasa lepida, Moore, Catal. Lep. Mus. E. I. C. ii. p. 413, pl. 21, fig. 3, *a, b, c, d.*
Limacodes graciosa, Westwood, Cabinet of Orient. Ent. p. 50, pl. 24, fig. 4 (1847).
Neæra graciosa, Walker, Catal. Lep. Het. B. M. v. p. 1139.

Male and female. Ferruginous-brown: forewing with a broad medial very obliquely transverse grass-green band, the inner border of the band ending at the posterior base of the wing, the outer border being nearly straight; base of the wing darker ferruginous-brown: hindwing pale ferruginous-brown, the base tinged with olive-brown. Body and legs ferruginous-brown; sides of the head and tegulæ green.

Expanse, ♂ $1\frac{2}{8}$, ♀ $1\frac{6}{8}$ inch.

Larva limaciform, pale green, whitish above; with a dorsal and a lateral dark green band, a subdorsal and a sublateral row of short fleshy, spinous tubercles, the spines of anterior and posterior tubercles tipped with red. Cocoon oval, purple-brown.

"Feeds on Coffea, Thæa, &c." (*Dr. Thwaites.*)

PARASA LÆTA (PLATE 130, FIG. 1, ♂).

Limacodes læta, Westwood, Cabinet of Oriental Entom. p. 50 (1847), ♂.
Nyssia læta, Walker, Catal. Lep. Het. B. M. v. p. 1137 (1855).
Parasa retracta, Walker, Catal. Lep. Het. B. M. xxxii. p. 483 (1865), ♀.

Forewing ferruginous-brown, with a transverse medial oblique grass-green band,

the inner border of which is indented in the middle, and the outer border twice angulated at its upper end and indented in the middle: hindwing yellowish; cilia pale ferruginous-brown. Thorax and head grass-green; abdomen yellowish.

Expanse, ♂ $1\frac{3}{8}$, ♀ $1\frac{4}{8}$ inch.

PARASA SIMILIS (Plate 130, Fig. 2).

Letois similis, Felder Novara Reise, Lep. iv. pl. 82, fig. 15 (1867-74).

Forewing ferruginous-brown, with a broad medial transverse grass-green band, the upper part of which is continued broadly inward to the base, the outer border waved: hindwing yellowish. Thorax and head green; abdomen yellowish.

Expanse $1\frac{1}{8}$ inch.

Genus MIRESA.

Miresa, Walker, Catal. Lep. Het. B. M. v. p. 1123 (1855).

Wings comparatively shorter and broader than in typical Parasa. Venation of forewing similar, except that the discocellulars are shorter and more erect, the upper being slightly bent outward in the middle, instead of acutely inward, and the submedian and internal vein are joined together at their base, the latter not having the lower short branch: hindwing with the discocellular shorter; other veins similar. Body more laxly clothed; legs and entire tarsi pilose; antennæ in male with stouter branches, and with short branches extending to tip; palpi shorter, less thickened in front.

Type, *M. albipuncta.*

MIRESA ARGENTIFERA (Plate 129, Fig. 1, ♂, 1*a*, larva).

Miresa argentifera, Walker, Catal. Lep. Het. B. M. v. p. 1124 (1855).

Forewing dark chestnut-brown; with an indistinct transverse discal glaucous fascia, which is bordered at its outer posterior end by a slender silvery-white waved streak; some silvery-white spots also showing on the exterior margin: hindwing ochreous-brown. Head and thorax ochreous-yellow; abdomen ochreous-brown; front of head, palpi, antennæ, and legs chestnut-brown.

Expanse, ♂ $1\frac{2}{8}$, ♀ $1\frac{4}{8}$ inch.

Larva limaciform, green; with two rather long anterior and two posterior subdorsal spinous tubercles, and very short intervening subdorsal tubercles, also a sub-lateral row of spinous tubercles, the anterior and posterior of which are the longest, at the base of anterior and posterior subdorsal tubercles is a transverse pinkish stripe; a dorsal pale line and pale spiracle rings. Cocoon round, purple-brown.

"Feeds on Musa." (*Dr. Thwaites.*)

Genus APHENDALA.

Aphendala, Walker, Catal. Lep. Het. B. M. xxxii. p. 494 (1865).

Wings shorter than in Thosea: hindwing less convex. Both wings with similar venation. Palpi less robust; legs more thickly pilose.

APHENDALA OCHRACEA (Plate 129, Fig. 3, ♀, 3*a*, larva).

Female: forewing reddish-ochreous, with an oblique discal transverse whitish band: hindwing dusky ochreous-brown. Thorax reddish-ochreous; abdomen ochreous-brown; head, palpi, and legs ochreous-grey.

Expanse 1 inch. In Coll. F. Moore.

Larva onisciform. Adult pale green, whitish above, with two dorsal rows of black spots, a black dorsal patch on second segment, and a single spot on anal segment, a lateral and sublateral row of spatular pointed spinous tubercles, the anterior and posterior of which are somewhat larger, and of a reddish colour. Cocoon round, pale brown.

"Food various." (*Dr. Thwaites.*)

APHENDALA CANA (Plate 130, Fig. 3, 3*a*, ♂ ♀, 3*b*, larva).

Parasa cana, Walker, Catal. Lep. Het. B. M. xxxii. p. 484 (1865).

Male. Forewing pale brownish-grey, sparsely brown scaled, with an antemedial pale grey oblique fascia, and a straight submarginal similar fascia: hindwing pale brownish-grey. Body, palpi, and legs above pale brownish-grey. Female paler: forewing with a slight grey-brown spot at end of the cell.

Expanse, ♂ $\frac{11}{10}$, ♀ $1\frac{2}{10}$ inch.

Larva onisciform, oblong, convex above, green, with a pale yellowish-white dorsal band, a subdorsal row of very short spinous tubercles, and a sublateral row of somewhat larger tubercles; spiracles with pale rings. Cocoon oval, purple-brown.

"Feeds on *Cassia auriculata*, &c." (*Dr. Thwaites.*)

APHENDALA APERIENS (Plate 130, Fig. 4, ♀, 4*a*, larva).

Miresa aperiens, Walker, Catal. Lep. Het. B. M. xxxii. p. 476 (1865).

Forewing dark cinereous-brown, with a medial very oblique pale whitish-cinereous line, and a straight submarginal similar line: hindwing paler. Body, palpi, and legs dark cinereous-brown; antennæ ochreous.

Expanse, ♂ $1\frac{2}{10}$, ♀ $1\frac{4}{10}$ inch.

Larva onisciform, bright green above, purple-brown below; with a subdorsal and a sublateral row of spinous tubercles; between the rows of tubercles is a dorsal row of purple-brown spots and a lateral row of anteriorly oblique fusiform spots. Cocoon rounded, purple-brown.

Genus THOSEA.

Thosea, Walker, Catal. Lep. Het. B. M. v. p. 1068 (1855).

Forewing almost straight along the costa, exterior margin oblique, convex, posterior margin convex; first subcostal straight, emitted at one-third and second from near end of the cell, third from the end, fifth from below the third immediately beyond the cell; upper discocellular erect, straight, lower bent, concave; a discoidal veinlet emitted within the cell from lower discocellular; upper radial from angle in middle of discocellulars, lower radial from angle close to lower end of the cell; median veins equidistant, lower at two-sixths before end of the cell; submedian much curved; internal vein with a lower branch at one-third from its base: hindwing short; exterior margin convex; subcostal arched at the base and slightly joined to costal; two subcostal branches on a footstalk immediately beyond end of the cell; discocellulars bent below the middle, emitting a discoidal veinlet within the cell from the angle; radial from lower discocellular above end of the cell; lower median branch at beyond one-third before end of the cell; a submedian and two internal veins. Body thick; palpi porrect, projecting half beyond the head, thick and truncated in front in male, third joint minute; antennæ in male with short broad branches to the tip, simple in female; legs thick, compactly pilose, middle and hind tibiæ spurred.

Type, *T. unifascia.*

THOSEA CERVINA (Plate 129, Fig. 2, ♂, 2*a*, larva).

Thosea cervina, Moore, Annals of Natural History, 1877, p. 348, ♂.

Male. Upperside greyish-fawn colour: forewing with a transverse discal narrow slightly curved dark brown band; a black spot at end of the cell. Underside uniform brown; a white spot at base of antennæ and on fore tibiæ.

Expanse $1\frac{5}{8}$ inch.

Larva limaciform, convex above, green, with a yellowish bordered dorsal irregular-shaped band, which is linear and purplish anteriorly, dilated across the middle and cleft posteriorly, and purple streaked, the middle angles red; with some anterior and posterior subdorsal spinous tubercles, a lateral row, and a sublateral row of longer tubercles. Cocoon purple-brown, oval.

"Food various." (*Dr. Thwaites.*)

THOSEA DUPLEXA (Plate 131, Fig. 3, ♀).

Female. Dark ferruginous-brown: forewing sparsely irrorated with black scales; a black scaled spot at end of the cell, and an obliquely transverse discal double dark brown line: hindwing, body, and legs ferruginous-brown, irrorated with black scales.

Expanse, ♀ $1\frac{3}{8}$ inch.

"Ceylon." (*Dr. Thwaites.*) In Coll. F. Moore.

Genus SUSICA.

Susica, Walker, Catal. Lep. Het. B. M. v. p. 1113 (1855).

Wings very short, broad, laxly scaled. Cilia long, spatular at tips: forewing somewhat elliptic; cell long, extending along the middle of the wing; costal vein at a wide distance from subcostal; first subcostal branch emitted at one-third and second from immediately before end of the cell, third from the end, trifid; discocellular bent in middle, emitting a slender discoidal veinlet within the cell, and upper radial from the angle, lower radial from near lower end; first or lower median at one-fourth and middle median at one-eighth before end of the cell; submedian curved upward towards median; internal vein forked at the base: hindwing short; two subcostal branches on a footstalk one-third beyond the cell; cell short; discocellular bent outward before the middle, emitting a discoidal veinlet within the cell from the angle; radial from near lower end of discocellular; three medians, a submedian, and two internal veins. Body somewhat slender; palpi porrect, thick, second joint projecting half its length beyond the head, third joint short, conical in male, cylindrical in female; antennæ bipectinated to tip in male, simple in female; femora and tibiæ compactly pilose, hind tibiæ with two pair of long spurs.

Type, *S. pallida.*

SUSICA SIGNATA (Plate 131, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Pale brownish-ochreous. Male: forewing ochreous-brown, sparsely black scaled; with a pale-bordered black scaled spot at end of the cell, a less defined similar spot beneath it, and a transverse discal black scaled band with pale outer border. Forelegs and tarsi with black bands. Female: forewing ochreous-brown, with less distinct and more sparsely disposed blackish scales, and an indistinct transverse discal blackish-scaled line and spot at end of the cell.

Expanse ♂ $\frac{8}{10}$, ♀ $1\frac{1}{10}$ inch. In Coll. F. Moore.

Larva onisciform, yellowish-green, or in adult tinged with purple; some linear marks along the back; a subdorsal row of short slight red tipped spinous tubercles, and a sublateral row of larger whiter tubercles, of which the spines are very short, the anterior and posterior tubercles lengthened, the two posterior being the longest. Cocoon small, oval, purple-brown.

"Feeds on Arbutilon, Ficus, &c." (*Dr. Thwaites.*)

SUSICA FRATERNA (Plate 131, Fig. 2, ♀, 2*a*, larva).

Female. Pale ochreous-brown: forewing very sparsely irrorated with minute dark brown scales, and with a transverse submarginal dark brown line. Body and legs ochreous-brown.

Expanse $\frac{9}{10}$ inch. In Coll. F. Moore.

Larva onisciform, green above, pink below; with a pale pinkish yellow-bordered dorsal band; a subdorsal row of short spinous tubercles, and a sublateral row of longer tubercles, the two posterior longest. Cocoon oval, pale violet-brown.

Genus NAROSA.

Narosa, Walker, Catal. Lep. Het. B. M. v. p. 1151 (1855).

Wings small, short, broad: forewing with the first subcostal branch curved upward towards the costal; discocellulars outwardly oblique, slightly bent in the middle; a discoidal veinlet emitted within the cell and upper radial from the angle; submedian very slender at the base; internal vein with a short lower basal branch: hindwing short; upper end of the cell short; two subcostals from angle at end of the cell; discocellular bent inward close to subcostal, a discoidal veinlet from the angle within the cell, lower discocellular long, radial from near its lower end. Body short; palpi slightly ascending, projected beyond the head, second joint long, thickish, fusiform, third joint short, conical, longer and slender, and more ascending in female, and curved over the head; antennæ in male closely bipectinated to half length, serrated to tip, simple in female; legs and base of tarsi laxly pilose.

NAROSA CONSPERSA (Plate 132, Fig. 2, 2*a*, ♂ ♀, 2*b*, larva).

Narosa conspersa, Walker, Catal. Lep. Het. B. M. v. p. 1151 (1855); Nietner, Observations on Enemies of the Coffee Tree in Ceylon, p. 20 (1861).

Male and female. Ferruginous-white, shining: forewing with seven or eight transverse outwardly oblique ferruginous bands, those nearest the base being somewhat macular; a dark brown spot at lower end of the cell, and some dark brown scales sparsely scattered over the bands: hindwing dusky white. Thorax and abdomen with ferruginous tufts; palpi and legs tinged with ferruginous.

Expanse, ♂ $\frac{7}{8}$, ♀ 1 inch.

Larva limaciform, widely oval, green, naked; transversely corrugated; with two longitudinal dorsal conical ridges, and, according to Nietner, the legs are yellow and retractile. Cocoon small, oval, whitish, with a circular brown spot at one end.

"Found on Coffee-trees from August to November. Cocoons affixed to the leaves. The moth is rather common during the dry weather." (*Nietner.*)

NAROSA ADALA (Plate 132, Fig. 3, ♂, 3*a*, larva).

Narosa Adala, Moore, Catal. Lep. Mus. E. I. C. ii. pl. 11, fig. 14, ♂; pl. 21, fig. 13, larva (1858-9).

Male. White, shining: forewing with indistinct very pale brown spots between the veins from the base to near the outer margin, a black dot at lower end of the cell and two dots below the apex: hindwing white, with two black dots below the apex. Body brownish-white; palpi brownish at the side; tarsi brownish at the tips.

Expanse 1 inch.

Larva limaciform, naked, pale green, convex above, with an indistinct dorsal and lateral rows of bluish-green dots and longitudinal lines, and a sublateral row of white dots. Cocoon whitish, oval.

"Feeds on Bauhinia, &c." (*Dr. Thwaites.*)

Genus CANDYBA.

Candyba, Walker, Catal. Lep. Het. B. M. vii. p. 1760 (1856).
Belgoræa, Walker, *id.* xxxii. p. 496 (1865).

Allied to Narosa: forewing in both sexes longer. Venation similar, except that the internal vein of forewing has only a short lower spur near the base. Body stouter; palpi porrect, stouter, and conical at tip in both sexes; legs and tarsi thickly pilose; antennæ thickly bipectinated to one-third length in male, simple in female.

CANDYBA PUNCTATA (Plate 132, Fig. 4, ♂).

Candyba punctata, Walker, Catal. Lep. Het. B. M. vii. p. 1761 (1856); Moore, Catal. Lep. Mus. E. I. C. ii. p. 418 (1858-9).
Belgoræa subnotata, Walker, Catal. Lep. Het. B. M. xxxii. p. 497 (1865).

Pure white, shining. Both wings with two minute black subapical marginal spots; forewing with a black dot at lower end of the cell. Branches of antennæ pale ochreous.

Expanse, ♂ 1, ♀ 1$\frac{3}{8}$ inch.

Genus CHEROMETTIA.

Male: forewing elongate, narrow; costa arched towards end, exterior margin oblique; cell long, narrow; first subcostal emitted at one-third before end of the cell, second and third from end of the cell, fifth from below third at one-third from its base; upper discocellular bent inward in the middle, lower very oblique and bent near lower end; a discoidal veinlet emitted within the cell from middle of discocellulars, and upper radial from its upper angle, lower radial from angle of lower discocellular; lower median at nearly one-third, and middle median at one-sixth before end of the cell; submedian arched; internal vein with a lower veinlet at one-third from its base: hindwing short, triangularly oval; cell extending to nearly half the wing; two subcostals on a footstalk at one-fifth beyond the cell; discocellulars bent inward in the middle, lower bent slightly outward, the radial from its angle, and a discoidal veinlet emitted within the cell from the middle; a submedian and two internal veins. Body stout; thorax and abdomen crested above; palpi porrect, squamose, second joint extending to front of the head, third joint small, conical; antennæ in male closely bipectinated to one-third from the base and serrated to tip; legs stout, very

pilose, laxly fringed at the sides; middle and hind tibiæ spurred. Female. Wings larger, broader: forewing less triangular: hindwing more convex externally; antennæ simple.

CHEROMETTIA FERRUGINEA (Plate 132, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Belippa ferruginea, Moore, Annals of Nat. Hist. 1877, p. 348.

Male and female ferruginous, cilia purplish-cinereous: forewing washed with chalybeate scales at the base, disc, and the apex; crossed by a subbasal darker sinuous band, a black-speckled spot at lower end of cell, and a large white-speckled black spot at apex of wing, which also crosses the cilia: hindwing paler ferruginous, with a small black-speckled spot at apex, and a short streak at anal angle. Abdomen with a slight dorsal black segmental fringe. Underside paler than above, the black apical spot on forewing prominent, those on hindwing less so. Tibiæ with a terminal black streak.

Expanse, ♂ $1\frac{2}{8}$, ♀ $1\frac{4}{8}$ inch.

Larva limaciform, naked, oval, convex above, pale bluish-green, with several longitudinal rows of small yellow spots and a sublateral row of black dots. Cocoon round, whitish.

"Feeds on Coffea, &c., &c." (*Dr. Thwaites.*)

Genus RABILA.

Rabila, Walker, Catal. Lep. Het. Brit. Mus. xxxii. p. 507 (1865).

Forewing elongate, narrow; costa almost straight, apex pointed, exterior margin oblique; first subcostal branch emitted at one-third before end of the cell, second at one-ninth, bifid at one-third from its base, fourth touching the third near its base, fifth from the fourth below the point of juncture with third; discocellular concave, bent near the lower end, upper radial from end of cell in a line with subcostal, lower radial from angle of discocellular; a slender discoidal veinlet emitted within the cell from end of lower discocellular; middle median from an angle immediately before end of the cell, lower median at beyond one-third before end of the cell; submedian with a lower basal branch: hindwing short, apex convex; cell broad, extending nearly half the wing; two subcostal branches on a footstalk beyond end of the cell; discocellular recurved, radial from its middle; a discoidal veinlet emitted within the cell from middle of discocellular; two upper medians from end of the cell, lower at one-fourth before the end; submedian and internal veins. Thorax rather broad, hairy; abdomen somewhat slender; palpi porrect, slender, somewhat cylindrical, projected beyond the head; antennæ bipectinated to tip, branches short; legs thickish, slightly hairy beneath.

RABILA FRONTALIS (Plate 132, Fig. 5, ♂).

Rabila frontalis, Walker, Catal. Lep. Het. Brit. Mus. xxxii. p. 508 (1865).

Male. Very pale fawn colour, whitish beneath. Forewings fawn colour: hindwings white, slightly hyaline. Legs whitish, fore tibiæ and fore tarsi fawn colour above.

Expanse $1\frac{5}{8}$ inch.

Family BOMBYCIDÆ.

Wings short, broad; forewing moderately falcate at the tip. Body short, thick; antennæ bipectinated in both sexes; proboscis obsolete; legs pilose.

Larva with sixteen legs, naked, elongate; head small; anterior segments more or less thickened; a dorsal fleshy spine on twelfth segment only, or with two subdorsal slender spines on sixth to thirteenth segment, as well as the dorsal. Cocoon oval; of the finest silken texture.

Typical species, *Bombyx mori.*

Genus TRILOCHA.

Naprepa,* Walker, Catal. Lep. Het. B. M. v. p. 1152 (1855).
Trilocha, Moore, Catal. Lep. Mus. E. I. C. ii. p. 382 (1858-9).

Wings very short, broad. Forewing triangular; costa slightly arched at the end, apex pointed, exterior margin slightly oblique and convex; costal and subcostal running close along edge of the margin; cell long, extending more than half length of the wing; first subcostal emitted near end of the cell, second from the end, quadrifid, the third thrown off from below second at a short distance beyond end of the cell, the fourth at nearly one-half from below the third, and fifth at nearly one-half from below the fourth; discocellulars bent inward in the middle, upper bent outward, upper radial from angle of upper discocellular, lower radial from below the middle angle; a discoidal veinlet emitted within the cell from the middle angle; three median branches, lower emitted at about one-half, and middle branch at one-fourth before end of the cell; submedian straight, extending close to the margin: hindwing short, broad; exterior margin very convex, abdominal margin long, anal angle slightly lobate; costal and subcostal vein united near the base; two subcostal branches on a footstalk at one-fourth beyond end of the cell; cell extending half the wing; discocellulars very oblique, upper bent inward, radial from the middle; three median branches, lower at nearly one-half before end of the cell, middle and upper from end of the cell; a submedian and an internal vein. Body short, thorax stout; palpi porrect, short, stout, pilose; antennæ bipectinated in both sexes; legs, including the tarsi, pilose.

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* Previously used by Walker (Catal. Lep. Het. B. M. v. p. 1046).

TRILOCHA VARIANS (Plate 133, Fig. 1, 1*a*, *b*, ♂ ♀, larva).

Naprepa varians, Walker, Catal. Lep. Het. Brit. Mus. v. p. 1153 (1855).
Trilocha varians, Moore, Catal. Lep. Mus. E. I. C. ii. p. 382, pl. 11*a*, fig. 6, ♂ (1858-9).

Male. Pale ochreous-brown, with a slight glaucous tinge: forewing with a very indistinct curved subbasal and two discal transverse sinuous darker brown lines, and a spot at end of the cell; cilia brown towards the apex: hindwing with dark brown cilia edged with grey, anal angle dark brown, abdominal margin brown spotted. Abdomen with brown tip. Female paler: forewing glaucous grey-brown; transverse lines indistinct, cell spot pale brown.

Expanse, ♂ 1, ♀ 1⅛ inch.

Larva long, cylindrical, pale brownish-grey, with darker dots, and a lateral row of black dots; a small slight transverse dorsal protuberance on the three anterior, sixth, and ninth segments, and a long slender fleshy tubercle on anal segment. Cocoon oval, of a slight pale silken texture.

"Feeds on Artocarpus integrifolia." (*Dr. Thwaites.*)

Genus ARISTHALA.

Aristhala, Moore, Proc. Zool. Soc. 1878, p. 704.

Forewing triangular; costa much arched at the end, apex falcate, exterior margin oblique, convex and angulated hindward; posterior margin almost straight; costal and subcostal vein with its first and second branches running very close together along the extreme margin; subcostal six-branched, first branch emitted immediately before end of the cell, third trifid, emitted from below second at one-fifth beyond the cell, sixth starting also from below second at a short distance beyond end of the cell; discocellular inwardly oblique, bent in the middle, emitting a discoidal veinlet within the cell from the angle, radial from middle of the discocellular; three median branches, lower at one-half and middle at one-fourth before end of the cell; a slender submedian and an internal vein extending close along the margin: hindwing short, broad, exterior margin very convex, abdominal margin long, anal angle somewhat lobate in male; costal and subcostal joined together to a short distance from the base; two subcostal branches from immediately beyond end of the cell; discocellular long, very oblique, recurved, emitting a discoidal veinlet within the cell from middle of upper end, radial from middle of lower end; two upper medians from end of the cell, lower at nearly one-half before the end; submedian and internal vein straight. Body stout, compactly pilose; palpi minute, porrect; antennæ short, broadly bipectinated to near the tip; legs, including the tarsi, densely pilose above.

ARISTHALA THWAITESII (Plate 133, Fig. 2, ♂).

Male. Ochreous-yellow: forewing crossed by four slender ferruginous-brown

bands; a ferruginous-brown patch at the apex, and a longitudinal curved fascia from middle of the discocellular widening to the outer margin below the apex: hindwing with ferruginous-brown outer border.

Expanse $1\frac{1}{2}$ inch. In Coll. F. Moore (*ex* Coll. Thwaites).

Family LASIOCAMPIDÆ.

In the typical genera the wings are short and broad in the male, longer and more ample in the female, and when at rest the hindwings project beyond the costal margin of the forewings. Head and palpi projected prominently forward. Antennæ in male broadly bipectinated, less so in female, or broadly bipectinated at base only and less to tip in male, and either moderately bipectinated, serrated, or simple in female; proboscis very short, invisible, or obsolete; abdomen long and attenuated in the male, very stout and generally with a lanuginose anal tuft in the female.

Larva elongated, pilose; some genera gregarious, others so only when young; either covered with silken hairs, which are generally arranged in tufts, some being provided with a dense anterior and posterior tuft, or an elongated fascicle projecting forward from each side of the head. Cocoon oval and firm, or fusiform and of slight texture.

Genus GANISA.

Ganisa, Walker, Catal. Lep. Het. B. M. v. p. 1190 (1855).

Wings broad: forewing slightly arched along the costa, pointed at apex, subfalcate, exterior margin erect, convex hindward; cell short, narrow; first subcostal emitted at one-fifth, and second and fifth from end of the cell, second trifid, third at one-third and fourth at one-sixth from beyond base of second; discocellular outwardly oblique, convex, radial from above the middle; lower median emitted at one-half and middle median at one-sixth before end of the cell; submedian with a slender lower basal branch: hindwing broad; apex almost pointed, exterior margin somewhat angular in the middle; anal angle slightly produced; cell lengthened hindward; two subcostals from angles at end of the cell; discocellular obliquely concave, radial from above the middle; lower median at one-half and middle median at one-fifth before end of the cell; a submedian and internal vein; thorax stout, woolly; abdomen short; palpi porrect, broadly ovate, pilose; antennæ bipectinated in both sexes, broadly in male; legs pilose.

GANISA POSTICA (Plate 133, Fig. 3, ♂).

Ganisa postica, Walker, Catal. Lep. Het. B. M. v. p. 1190 (1855); Moore, Catal. Lep. Mus. E. I. C. ii. p. 366, pl. 10*a*, fig. 5, ♂.

Greyish-brown; both wings with a glaucous tinge: forewing with a greyish ferruginous-brown subbasal band, three transverse curved discal sinuous lines,

followed by an outer straight duplex line, the latter extending from the apex to posterior margin; a small black-speckled spot at end of the cell: hindwing with two indistinct ferruginous-brown transverse subbasal sinuous lines and a more distinct waved discal line. Body greyish ferruginous-brown; shaft of antennæ greyish-brown.

Expanse 2 to $2\frac{1}{2}$ inches.

Genus MESSATA.

Messata, Walker, Catal. Lep. Het. B. M. v. p. 1108 (1855).
Stenoglene (part), Felder, Novara Reise, Lep. iv. pl. 95 (1868-74).

Male. Wings ample, short, broad: forewing triangular; costa arched towards end, exterior margin almost erect, very slightly convex; cell short; first subcostal emitted at one-fifth and second from immediately before end of the cell, trifid, fourth at about one-fifth from beyond base of second, and fifth from end of the cell; second and fifth in some specimens of type both from end of the cell; upper discocellular bent sharply outward in the middle, the radial from its angle; three median branches, lower at one-half, and middle at nearly one-fourth before end of the cell; submedian straight, with a slender lower basal branch: hindwing short, broad; exterior margin very convex; cell short; subcostal arched from the base; two subcostal branches on a footstalk one-fifth beyond end of the cell; upper discocellular very short, bent outward in middle, lower very outwardly oblique, radial from angle of the upper; lower median at one-half and middle median at nearly one-fourth before end of the cell. Thorax broad, laxly pilose, with long radiating hairs projecting from each side; palpi porrect, thickly pilose, pointed at tip; antennæ deeply bipectinated; legs pilose. Female: forewing of a more lengthened triangular: hindwing larger and more convex at apex.

Type, M. plumipes.

MESSATA PLUMIPES (Plate 133, Fig. 5, *5a*, ♂ ♀).

Dreata plumipes, Walker, Catal. Lep. Het. B. M. iv. p. 907 (1855), ♂.
Messata rubiginosa, Walker, Catal. Lep. Het. B. M. v. p. 1108 (1855), ♀.

Male. Dark ferruginous-brown: forewing with three transverse medial very indistinct black-speckled waved bands, a very distinct broader, straight, oblique discal band, and a parallel submarginal band: hindwing paler ferruginous-brown, with an obsolescent slightly darker discal and submarginal band showing on some specimens. Underside pale ferruginous. Female. Dark reddish-ferruginous, with the transverse bands very indistinct; abdomen paler ferruginous.

Expanse, ♂ $2\frac{1}{2}$, ♀ $2\frac{3}{4}$ inches.

MESSATA SIMILIS (Plate 133, Fig. 4, ♂).

Male. Yellowish-ochreous : forewing with three transverse medial black-speckled waved indistinct bands, and two oblique discal broader straight bands : hindwing uniformly paler ochreous.

Expanse $2\frac{1}{4}$ inches. In Coll. F. Moore.

MESSATA ÆNESCENS (Plate 134, Fig. 1, ♂).

Messata ænescens, Moore, Proc. Zool. Soc. 1879, p. 409.

Male. Upperside ænescent-yellow : forewing with three very prominent oblique transverse discal purple-brown speckled bands, the two inner bands linear and curved, the outer one composed of broad lunules ; an inner medial series of three less oblique very indistinct and sparsely speckled bands : hindwing with a distinct submarginal broad purple-brown speckled lunular band. Thorax, head and forelegs dark ochreous-yellow. Underside duller coloured, with the bands as above very indistinct.

Expanse $2\frac{4}{8}$ inches.

MESSATA QUADRIFASCIATA (Plate 134, Fig. 3, ♂).

Messata quadrifasciata, Moore, Proc. Zool. Soc. 1879, p. 409, ♂.

Male. Brownish-ochreous : forewing numerously speckled with minute black scales ; across the middle are two or three very indistinct waved black-speckled bands, beyond which are two oblique discal black bands, the inner band of the latter being broadest and very prominent : hindwing with a transverse medial black-speckled band, and a less distinct submarginal band. Underside brighter coloured ; the inner band on both wings prominent.

Expanse $2\frac{3}{8}$ inches.

In this species the wings are narrower than in those of its allies.

MESSATA VIALIS (Plate 134, Fig. 4, ♂).

Messata vialis, Moore, Proc. Zool. Soc. 1879, p. 409.

Male. Upperside luteous-brown : forewing tinged with olivaceous ; with a prominent oblique transverse discal slender black band with a pale yellow outer border : hindwing with a very indistinct medial and still less distinct submarginal transverse dusky band. Underside paler ; a dusky oblique band on forewing slightly apparent. Front of head, palpi, and legs above, dark brown.

Expanse, ♂ $2\frac{3}{4}$ inches.

MESSATA TRISTIS (Plate 134, Fig. 2, ♀).

Stenoglene tristis, Felder, Novara Reise, Lep. iv. pl. 95, fig. 4 (1868-74), ♀.

Female. Dark olivaceous-brown : forewing with two transverse oblique disca darker brown narrow bands, the outer band bordered by a pale violaceous apical

fascia and posterior grey-speckled fascia: hindwing paler olivaceous-brown; abdominal margin grey-speckled.

Expanse $2\frac{3}{8}$ inches.

Described from the figure quoted above.

Genus PANDALA.

Pandala, Walker, Catal. Lep. Het. B. M. iv. p. 921 (1855).

Forewing short, broad; exterior margin very slightly oblique and convex; first subcostal branch emitted at one-third before end of the cell, second from close to end, trifid, fifth from end of the cell; the cell short, broad; discocellular outwardly oblique, bent outward near upper end, radial from the angle; middle median at one-sixth and lower at one-half before end of the cell: hindwing short, broad, exterior margin very convex; upper end of the cell extending to one-fourth and lower end to nearly one-half length of the wing; first subcostal at a short distance before end of the cell; discocellular very obliquely recurved, slightly bent outward near upper end, radial from the angle; middle median at one-third and lower at one-half before end of the cell. Body short; thorax pilose; palpi broad, laterally pilose; antennæ broadly bipectinated; legs short, femora and tibiæ pilose.

PANDALA DOLOSA (PLATE 134, FIG. 5, ♂).

Pandala dolosa, Walker, Catal. Lep. Het. B. M. iv. p. 922 (1855), ♂.

Male. Purplish-brown: forewing with a transverse subbasal darker brown narrow sinuous band, three or four medial bands, and a submarginal band; the lower basal and outer marginal areas also darker brown: hindwing with three or four medial, and a submarginal transverse darker brown narrow sinuous band.

Expanse $1\frac{3}{4}$ inch.

Genus EUPTEROTE.

Eupterote, Hübner, Verz. bek. Schmett. p. 187 (1818-25).
Dreata (part), Walker, Catal. Lep. Het. B. M. iv. p. 902 (1855).

Wings large: forewing triangular; costa much arched towards end, apex pointed, exterior margin oblique, posterior margin straight; cell short, extending to one-third the wing; first subcostal emitted at one-fourth before end of the cell, second from the end, quadrifid, the fifth from below second near its base beyond the cell; upper discocellular shortest, bent, lower outwardly oblique, radial from angle of upper discocellular; three median branches, first or lower at nearly one-half and second at one-seventh before end of the cell; submedian slightly recurved, with a slender lower basal branch: hindwing broad; costal vein running close to the margin, subcostal with two branches on a footstalk at a short distance beyond end of the cell; discocellular very oblique, radial from near upper end; cell short, triangular, upper

end half length of the lower; median three-branched, lower at one-half and middle at one-fourth before end of the cell; a submedian and a slender internal vein. Thorax robust, pilose, abdomen attenuated and tufted at tip in male, stout in female; palpi porrect, thick, pilose; antennæ broadly bipectinated in male, minutely bipectinated in female; legs densely pilose.

Type, E. Fabia (Cramer, pl. 250, f. B).

EUPTEROTE OCHRIPICTA (Plate 136, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Eupterote ochripicta, Moore, Proc. Zool. Soc. 1879, p. 410.

Male and female. Upperside deep ochreous-yellow: forewing with four purple-brown transverse subbasal and three discal narrow sinuous bands, an intervening medial broader maculated band, a straight submarginal speckled band which is widest and with a narrow outer line in female, and an exterior zigzag band, the interspace between the two latter, in the male, maculated and darker blotched at anterior and near posterior end: hindwing with four discal sinuous bands and a straight submarginal and zigzag outer band, with maculated interspace in male and a narrow line in female. Markings in female strongest.

Expanse 5 inches.

Larva dark purplish-brown; with dorsal tufts of long and short dark brown hairs, also a lateral and sublateral row of tufts of short hairs; on each segment is a longitudinal series of white dots; a red subdorsal spot on fifth to eleventh segments; legs red. Cocoon fusiform, pale purplish-brown, interspersed with hairs. Pupa purplish-red.

"Feeds on Acanthads." (*Thwaites.*)

EUPTEROTE MOLLIFERA (Plate 135, Fig. 3, 3*a*, ♂ ♀, 3*b*, larva).

Dreata mollifera, Walker, Catal. Lep. Het. B. M. xxxii. p. 376 (1865), ♂.
Tagora antheræata, Walker, *id.* p. 512, ♀.
Homochroa ornata, Felder, Novara Reise, Lep. iv. pl. 94, fig. 3 (1868-74), ♀.

Male. Bright yellowish-ochreous, the basal area and posterior border suffused with dull purplish-ochreous: forewing with a transverse subbasal and three or four discal dull reddish-brown denticulated lines, followed by an oblique outer discal almost straight duplex line, beyond which is a submarginal row of dark-bordered white-centred dentate spots; a purplish-grey streak below the apex: hindwing with similar transverse subbasal and discal denticulated lines, but less distinct and very slender outer discal, and submarginal dentate line, the latter not spotted. Female. With similar but somewhat more distinctly defined transverse markings, the outer duplex line prominent, the inner line being broad.

Expanse $2\frac{5}{8}$ to $3\frac{5}{8}$ inches.

Larva with dorsal tufts of black hairs springing from a whitish base, the segments below the stigmata also hairy; numerously dotted with black; a dorsal blue-black band, a subdorsal pale pinkish band traversed by a grey line, the lower part being purplish-grey; a lateral row of small black spots; stigmata and legs pink; head black. Pupa purplish-red.

"Feeds on Acanthads." (*Thwaites.*)

EUPTEROTE DIFFUSA (Plate 135, Fig. 2, ♂).

Dreata diffusa, Walker, Catal. Lep. Het. B. M. xxxii. p. 374 (1865), ♂.

Male. Ochreous-yellow: forewing crossed by four or five oblique medial indistinct purplish-ochreous sinuous lines, and an outer slightly more distinct straight line, beyond which is a submarginal row of darker dentate spots bordered by a slender dentated line; a slight purplish-ochreous subapical streak: hindwing crossed by four similar lines, an outer curved straight more distinct line, a submarginal less distinct spot and outer dentated line. Head, palpi, and legs above purplish-ochreous.

Expanse, ♂ $2\frac{3}{8}$ inches.

Genus TAGORA.

Tagora, Walker, Catal. Lep. Het. B. M. v. p. 1188 (1855).

Male. Forewing narrower than in Eupterote; exterior margin shorter and less oblique, the posterior margin longer: hindwing also narrower, and the exterior margin more oblique. Venation similar.

Type, T. glaucescens.

TAGORA MURINA (Plate 136, Fig. 2, ♂).

Tagora murina, Moore, Annals of Nat. Hist. 1877, p. 347.

Male. Upperside greyish fawn colour: forewing crossed by a darker broad upper subbasal curved zigzag-bordered band, several discal narrow lunular lines, and a contiguous straight double outer line; the outer border of wing broadly greyish and dotted on the veins: hindwing crossed by a very indistinct darker discal lunular line, a straight outer band, and submarginal dots. Underside brown, with indistinct lunular discal lines, outer straight narrow band, and submarginal dots.

Expanse 3 inches.

Genus BRACHYTERA.

Brachytera, Felder, Novara Reise, Lep. iv. pl. 95, fig. 1 (1868-74).

Wings small: forewing shorter, broader, and more regularly triangular in form than in Eupterote: hindwing shorter, comparatively broader, and less convex externally. Venation similar.

BRACHYTERA GEMINATA (Plate 137, Fig. 2, 2*a*, ♂ ♀).

Dreata geminata, Walker, Catal. Lep. Het. B. M. iv. p. 907 (1855), ♂.

Male. Pale yellow: forewing with a transverse oblique outer discal slender brown band, beyond which are two or three subapical and two or three posterior brown spots, across the middle there is a very indistinct similar brownish line: hindwing with a transverse outer discal slender brown band. Female. Pale ochreous-yellow: wings with similar markings as in male.

Expanse, ♂ $1\frac{3}{4}$, ♀ $2\frac{1}{2}$ inches.

BRACHYTERA PHALÆNARIA (Plate 135, Fig. 1, ♂).

Brachytera phalænaria, Felder, Novara Reise, Lep. iv. pl. 95, fig. 1 (1868-74), ♂.

Male. Bright yellow: forewing with a transverse medial slightly waved slender brown band, and an outer discal band, beyond which is a submarginal extremely obsolescent denticulated line, and some inner apical speckled spots: hindwing with a transverse outer discal slender brown band.

Expanse, ♂ 2 inches.

Genus HORANPELLA.

Forewing comparatively longer, and more pointed at the apex than in Brachytera, the three lower subcostal veins emitted nearer together from below the second, the lowest branch being thrown off at some distance beyond the cell: hindwing also longer, and more convex externally. Antennæ in male very slender, the branches very short.

HORANPELLA PLACIDA (Plate 137, Fig. 1, 1*a*, ♂ ♀).

Male and female. Pale ochreous-brown: forewing with a transverse submarginal indistinct brown line, externally to which is a row of indistinct brown-speckled spots: hindwing with a similar indistinct brown line and outer spots. Front of head, palpi, and legs dark ochreous-brown.

Expanse, ♂ 2, ♀ 3 inches. In Coll. F. Moore (*ex* Coll. Thwaites).

Genus SANGATISSA.

Male: forewing elongated; costa slightly arched at the end, exterior margin oblique, posterior angle convex; first subcostal emitted at nearly one-third before end of the cell, second from the end of the cell, quadrifid, the fifth starting from second close to its base; discocellular bent inward near the middle, radial from middle of the upper end; three medians, first or lower branch at one-third and middle branch at one-seventh before end of the cell; submedian with a short basal lower branch: hindwing somewhat lengthened anteriorly, exterior margin very oblique, slightly convex; costal vein straight, subcostal with two branches on a footstalk at a short

distance beyond end of the cell; discocellular bent inward before the middle, lower end very oblique, radial from middle of upper end; three medians, lower at beyond one-third and middle branch at one-sixth before end of the cell; a submedian, and a short internal vein. Body extending beyond hindwings; thorax robust, clothed with long lax hairs; abdomen pilose, tufted at the tip; palpi porrect, thick, very laxly pilose; antennæ very broadly bipectinated to tip, the branches ciliated; legs laxly pilose.

SANGATISSA SUBCURVIFERA (Plate 134, Fig. 6, ♂).

Dreata subcurvifera, Walker, Catal. Lep. Het. B. M. xxxii. p. 375 (1865), ♂.

Dull pale purplish greyish-ochreous: forewing palest, with two longitudinal curved purple-black speckled bands, which are crossed by the several pale veins, and a similar band on the exterior margin; the bands joining at the apex: hindwing with a marginal and a submarginal similar band. Thorax, head, palpi, and legs above brighter ochreous.

Expanse $2\frac{2}{8}$ inches.

Genus HONDELLA.

Forewing long, fusiform; first subcostal emitted at nearly one-half before end of the cell, second at one-sixth, waved, third curved upward and touching second near its base, fifth from end of the cell; discocellular obliquely concave, bent near lower end, radial from angle; middle median from angle at one-sixth and lower at three-sixths before end of the cell: hindwing long, extending beyond end of submedian of forewing; two subcostal branches on a footstalk beyond end of the cell; discocellular obliquely concave, bent near lower end, radial from its angle; two upper medians from end of the cell, lower at nearly one-half before the end. Body short; thorax and head very laxly pilosè; palpi laxly pilose, antennæ very broadly bipectinated; legs slightly pilose.

HONDELLA JUVENIS (Plate 137, Fig. 4, ♂).

Philomacra juvenis, Walker, Catal. Lep. Het. Brit. Mus. v. p. 1099 (1855).

Male: forewing fuliginous ochreous-brown, with a fascia of darker brown scales below base of costal vein, another more broadly below the median vein, and a third along the submedian: hindwing fuliginous-brown. Body, legs, and antennæ darker brown, shaft of antennæ ochreous-brown.

Expanse $1\frac{7}{12}$ inch.

Genus LENODORA.

Male. Wings very short and broad: forewing with the cell long, narrow, extending nearly half the wing; subcostal six-branched, very thick at its base, first branch emitted at one-third, second at one-half, and fourth from immediately before

end of the cell, second bifid at one-third from its base, fifth and sixth on a footstalk at a short distance beyond end of the cell; discocellular extremely slender, visible only under magnifying power; median four-branched, first or lower at one-third, second at one-half, and third from an angle immediately before end of the cell; submedian with a short slender lower basal branch: hindwing with very oblique costal margin, exterior margin convex; cell triangular; costal vein much arched to about one-half its length; subcostal widely separated from costal, three-branched, first branch at one-fourth before end of the cell, bifid at one-third from its base, the first branch emitting a short oblique cross branchlet which joins the costal at its middle; discocellular very oblique, recurved, visible only under magnifying power; four medians, first or lower at one-half, second at one-fourth, and third from angle immediately before end of the cell; a submedian and an internal vein. Body extending beyond hindwings, laxly pilose; palpi porrect, densely pilose, thick in front; antennæ broadly bipectinated; legs pilose. Female: forewing elongated: hindwing also longer; exterior margin very convex.

Type, L. vittata (*Lasiocampa vittata*, Walk. Catal. Lep. Het. B. M. vi. p. 1440).

LENODORA SUBCOSTALIS (Plate 137, Fig. 3, 3*a*, ♂ ♀, 3*b*, larva).

Miresa subcostalis, Walker, Catal. Lep. Het. B. M. xxxii. p. 476 (1865).

Male. Dark ferruginous-red: forewing with a slender longitudinal whitish streak extending from base through the cell and along the lower subcostal veins. Female dull ferruginous-red, the longitudinal streak on forewing less distinct.

Expanse, ♂ 1¼, ♀ 1¾ inch.

Larva with sparse tufts of fine pale brown hairs; colour purple-black above, pale purplish-brown beneath; anterior segments dorsally divided by pale bands; a sublateral series of black irregular oblique streaks and small dots; head black streaked; claspers with black dots; on the fifth to twelfth segment is a subdorsal tuft of short white hairs. Cocoon subfusiform, purplish-grey. Pupa purplish-red.

"Feeds on Gramineæ." (*Thwaites.*)

Genus TRABALA.

Amydona,* Walker, Catal. Lep. Het. B. M. vi. p. 1413 (1855).
Trabala, Walker, *id.* vii. p. 1785 (1856).

Male. Forewing short, broad; cell narrow, extending to one-third the wing; subcostal six-branched, first branch emitted at two-thirds and second at one-half

* Previously used by Walker for a genus of Lepidoptera (v. p. 1110).

before end of the cell, second bifid at two-thirds from its base, fourth at one-sixth before end of the cell, fifth and sixth on a footstalk at a short distance beyond end of the cell; discocellular extremely slender, visible only under a high magnifying power; median four-branched, first or lower at two-thirds, second at nearly one-half, and third at one-sixth before end of the cell; submedian slightly curved downward: hindwing short, ovate; costal border very oblique, exterior margin convex, abdominal margin long; costal vein bent near the base and then arched to end; subcostal two-branched, its first branch emitted near the base and joined slightly to the costal at the basal angle; discocellular extremely slender, very oblique, visible only under a high magnifying power; four median branches, a submedian, and an internal vein. Body stout, woolly, abdomen attenuated at tip in male, densely tufted at tip in female; palpi porrect, not extending beyond the head, obtuse in front, compactly pilose; antennæ bipectinated to tip in both sexes; legs short, densely pilose. Female: forewing lengthened, exterior margin oblique and slightly scalloped: hindwing with the exterior margin scalloped.

Type, T. Vishnu.

TRABALA VISHNU (Plate 138, Fig. 1, 1*a*, *b*, 2, 2*a*, ♂ ♀, larva).

Gastropacha Vishnu, Lefebvre, Zool. Journ. iii. p. 207 (1827), ♀.
Amydona prasina (part), Walker, Catal. Lep. Het. B. M. vi. p. 1417 (1855).

Male. Olive-green, changing after death to greenish ochreous-yellow: forewing with a transverse subbasal, an oblique medial discal, and a submarginal zigzag lunular darker line; a small dark spot at end of the cell: hindwing with a medial discal transverse line, and a submarginal zigzag lunular line. Female paler: forewing with less distinct subbasal and medial line, the submarginal composed of blackish-speckled dentate spots, the cell spot large and greyish; the area beneath the cell reddish and dark speckled: hindwing with broader transverse discal line and blackish-speckled submarginal zigzag spots. Anal tuft ochreous-yellow.

Expanse, ♂ $1\frac{5}{8}$, ♀ $2\frac{1}{2}$ to 3 inches.

Larva olive-brown or pinkish-brown; with a subdorsal and lateral row of black tubercular spots, from which radiate a tuft of black hairs; a dorsal tuft of radiating black hairs, and an intervening conical tuft of pale pinkish hairs, a lateral row of decumbent tufts of pale pink hairs, and a projecting tuft of long hairs on each side of the head; a black dorsal collar on front of second segment; head with red spots; legs red. Cocoon pale olivaceous or pinkish-brown, protuberant laterally on one side at each end. Pupa brownish-red.

"Feeds on Terminalia and Eugenia." (*Dr. Thwaites.*)

Genus TARAGAMA.

Megasoma,* Boisd. Feisthamel, Ann. Soc. Ent. France, i. p. 340 (1832).
Streblote (part), Hübner, Verz. bek. Schmett. p. 193.
Taragama, Moore, Catal. Lep. Mus. E. I. C. ii. p. 427 (1858-9).

Male. Forewing elongated, narrow, triangular; cell long, narrow, extending nearly one-half the wing; subcostal six-branched, first branch emitted at one-half, and second immediately before end of the cell, second bifid at half its length, fourth, fifth, and sixth on a footstalk beyond end of the cell; discocellular concave; four median branches, first or lower at two-thirds, second at one-third, and third immediately before end of the cell; submedian recurved: hindwing short, triangular, exterior margin convex; costal vein bent down near the base and thence curved to apex; cell short, triangular; two subcostal branches, first at two-thirds before end of the cell, joined to costal for a short distance from its base; discocellular very oblique; four median branches, lower emitted at one-third, and second from immediately before end of the cell, third and fourth on a footstalk beyond end of the cell; a submedian and internal vein. Body long, extending nearly half beyond hindwing, compactly woolly, tufted at tip; thorax and head conical in front: palpi porrect, first and second joints thick, of equal length, third joint short, conical; antennæ very broadly bipectinated to half the length, the branches graduated thence to tip; legs short, pilose. Female: forewing longer: hindwing longer and narrower. Body stout; antennæ with short equal branches.

Type, T. repanda (Megasoma repanda, Feisth. Ann. Soc. France, 1832, p. 340).

TARAGAMA IGNIFLUA (Plate 142, Fig. 2, 2*a*, ♂ ♀).

Dark red. Male: forewing with a postmedial transverse oblique pale ochreous-white waved line, a dentate spot on the costa, and a spot at base of the wing below the cell; outer border of the wing paler and grey speckled: hindwing with a short broad pale ochreous-white fascia from anal angle. Thorax above, head and palpi brownish greyish-ochreous; the tegulæ dark red, abdomen dark red, with greyish-ochreous segmental fringe; antennæ and legs red. Female slightly paler: forewing with more prominent postmedial waved pale line, broader costal dentate spot and larger basal spot, the waved line dilated at costal end; a slight brown-speckled lunule at end of the cell: hindwing also paler, with a well-defined broad entirely transverse pale fascia. Body paler.

Expanse, ♂ 2⅛, ♀ 3½ inches. In Coll. F. Moore (*ex* Dr. Thwaites' Coll.).

Genus METANASTRIA.

Metanastria, Hübner, Verz. bek. Schmett. p. 186 (1818-25).

Forewing comparatively shorter, broader, and more triangular than in Taragama;

* Previously used in Coleoptera.

venation similar: hindwing also broader, exterior margin being very convex; thorax stouter, less produced in front; palpi thicker, second joint more ovate; legs stouter; antennæ with more regularly graduated branches.

Type, M. Hyrtacà.

METANASTRIA HYRTACA (Plate 141, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Phal. Bombyx Hyrtaca, Cramer, Pap. Exot. iii. p. 97, pl. 249, fig. F (1782), ♂.
Phal. Bombyx lusca, Fabricius, Mant. Ins. ii. p. 112 (1787).
Bombyx Buddha, Lefebvre, Zool. Journ. iii. p. 208-9 (1827), ♂ ♀.
Lebeda Buddha, Moore, Catal. Lep. Mus. E. I. C. ii. p. 423, pl. 12*a*, fig. 2, 2*a*, ♂ ♀.
Lebeda plagiata, Walker, Catal. Lep. Het. B. M. vi. p. 1464 (1855), ♂.

Dark purplish-ferruginous. Male: forewing with a transverse antemedial and a postmedial slightly waved ferruginous-grey line, and two similar medial lines, the outer one being convexly angular beyond the cell, between the two latter lines is a dark purple-brown patch extending from the costa to lower median vein, this patch being marked by a pure white lobate spot; exterior border darker, crossed by a very indistinct submarginal row of dark brown speckled spots. Female: forewing with four similar transverse ferruginous-grey equidistant lines; the basal area between the medial lines, and the outer border darker coloured, the submarginal row of spots more distinct and grey speckled. Front of thorax, head, palpi, and antennæ greyish-ferruginous.

Expanse, ♂ 1$\frac{7}{8}$, ♀ 3 inches.

Larva finely pilose, with sublateral projecting tufts; colour purplish-grey, minutely speckled with purple-brown; two dark purple-brown dorsal lines, each line being angled outward on each segment except the anterior and head, on both which they are straight and contiguous; a subdorsal slender straight line, and a lateral row of slender oblique streaks, one on each segment; between fourth and fifth anterior segments is a transverse dorsal red streak. Cocoon oval, pale purplish-ferruginous. Pupa purplish-brown; thorax and segments slightly pilose.

"Feeds on Spiridius." (*Dr. Thwaites.*)

Genus ESTIGENA.

Megasoma (Group 4), Walker, Catal. Lep. Het. B. M. vi. p. 1452 (1855).
Estigena, Moore, Catal. Lep. Mus. E. I. C. ii. p. 426 (1858-9).

Male: forewing elongated, narrow; costa almost straight, exterior margin very oblique and slightly convex, posterior margin very short, concave at the base; cell long, extending nearly half the wing, narrow; subcostal six-branched, first emitted at one-half and second at one-eighth before end of the cell, second bifid at two-thirds from its base, fourth trifid, the fifth at one-sixth from base of the fourth, and sixth (or radial) at one-fifth from base of fifth; discocellular slightly concave; four

medians, first or lower from close to base, second nearly at one-half and third at one-seventh before end of the cell; submedian curved: hindwing short, narrow, ovate, the costa very much arched at the base, exterior margin straight to the middle, where it is produced and bluntly angular, abdominal margin short; cell extending in middle to half the wing; costal vein at a wide distance from the margin, and with six curved branchlets ascending at nearly equidistances, upward to the costal margin; subcostal two-branched, the first at one-fifth before end of the cell and with an upper branchlet from near its base which is joined to the costal beyond the sixth branchlet; disco-cellular oblique, angled above the middle; four medians, the first at one-sixth before end of the cell, second, third, and fourth on a footstalk beyond end of the cell; submedian and internal vein long, submedian curved. Body long, extending one-third beyond hindwing, robust in female; palpi long, porrect, laxly squamose, second joint very long, extending half its length beyond the head, obtusely pointed at the tip; head pointed in front; antennæ bipectinated, broadly at the base and graduated to the tip, shaft curved abruptly hindward in the middle; legs short, thick, pilose. Female with broader but similar shaped wings.

Type, E. pardale.

ESTIGENA NANDINA (Plate 142, Fig. 1, 1*a*, ♂ ♀).

Estigene Nandina, Moore, Catal. Lep. Mus. E. I. C. ii. p. 427 (1858-9), ♂.
Gastropacha abstracta, Walker, Catal. Lep. Het. B. M. xxxii. p. 551 (1865), ♀.
Lebeda scriptiplaga, Walker, *id.* p. 569 (1865), ♂.

Male. Ferruginous: forewing with three indistinct black-speckled transverse sinuous lines, and a minute black dot at end of the cell: hindwing paler on abdominal border; upper part of wing yellowish, with indistinct black-speckled sinuous lines, and two black dots above end of the cell. Female darker ferruginous, the black speckles more dispersed over the wing and forming less defined sinuous lines. Thorax and head with a longitudinal indistinct black streak; palpi beneath blackish; antennæ with blackish-ferruginous branches.

Expanse, ♂ $1\frac{5}{8}$, ♀ $2\frac{1}{2}$ inches.

Genus ODONESTIS.

Odonestis, Germar, Bomb. ii. p. 49 (1813); Stephens; Walker.

Male. Forewing broad; costal margin slightly arched towards the end, apex pointed, exterior margin slightly oblique, convex, posterior margin convex before the base; cell narrow, extending to half the wing; subcostal six-banched, first subcostal emitted at two-thirds and second at one-third before end of the cell, second bifid at one-third from its base, fourth from close before end of the cell, fifth and sixth on a short footstalk beyond end of the cell; discocellular inwardly oblique, concave; four median branches, first or lower branch emitted at three-fourths, second at one-half, and third

from close before end of the cell; submedian straight: hindwing bluntly ovate; costa abruptly convex at the base, apex and exterior margin very convex; costal vein much arched to nearly one-half its length, emitting a basal and a subbasal spur upward towards the margin; subcostal three-branched, first branch emitted at one-half before end of the cell, bifid at a short distance from the base, and emitting a cross oblique branchlet to the costal; discocellular recurved, outwardly oblique; four median branches, first or lower at one-half and second at one-fourth before end of the cell, third and fourth from contiguous angles at end of the cell; a submedian and an internal vein. Body pilose; abdomen attenuated, tufted at the tip; palpi projecting beyond the head, pointed, pilose; legs, including fore tarsi, pilose; antennæ long, bipectinated. Female with larger and more pointed forewings; abdomen stout; antennæ with short branches to tip; palpi less thickly pilose.

Type, O. Potatoria.

ODONESTIS DIVISA (Plate 141, Fig. 2, ♀).

Odonestis divisa, Moore, Proc. Zool. Soc. 1879, p. 408.

Female. Upperside: forewing dark chestnut-red, dusky red posteriorly, and washed externally with purple-grey; a narrow pale-bordered line recurving from apex to middle of hind margin; a large pearly-white red-speckled spot at end of the cell, and a small white spot above it: hindwing dark chestnut-red along anterior half, pale purplish-red on posterior half, the two colours defined by a straight division. Thorax, head, palpi, and legs dusky red. Abdomen pale purplish-red. Underside duller coloured.

Expanse, ♀ $2\frac{5}{8}$ inches.

Genus LEBEDA.

Lebeda, Walker, Catal. Lep. Het. B. M. vi. p. 1453 (1855).

Forewing elongated; costa arched, apex pointed, exterior margin oblique, posterior margin recurved, convex towards the base; cell narrow, extending one-third the wing; subcostal vein six-branched; first subcostal emitted at two-thirds and second at nearly one-half before end of the cell, bifid at one-sixth from its base; fourth, fifth, and sixth branches on a footstalk beyond end of the cell, fifth bifid; discocellular concave; four medians, first branch emitted at three-fourths, second at one-half, and third from close before end of the cell; submedian much recurved: hindwing short, broad, costa much arched at base and in middle, exterior margin convex; costal vein convex at the base; subcostal two-branched, first emitted from beyond one-half before end of the cell and joined to the costal by a short cross spur near the base; discocellular oblique, recurved; four medians, two lower branches from near end of the cell, third and fourth on a footstalk beyond end of the cell; a submedian and an internal vein. Body thick; abdomen tufted at tip; palpi porrect, very thick,

extending slightly beyond the head, squamose, second joint obtuse, third joint small and rounded in front; antennæ long, recurved backward, bipectinated to tip; legs short, thick, pilose. Female with more ample but similar shaped wings. Body stouter; antennæ with shorter branches.

Type, L. nobilis.

LEBEDA VARIEGATA (Plate 139, Fig. 1, ♂).

Lebeda variegata, Moore, Annals of Nat. Hist. 1877, p. 347.

Male. Upperside dark dull ferruginous-brown; cilia greyish: forewing with a broad basal and a discal ochreous band, the former with zigzag border and variegated with brown wavy markings, a large oval upper patch, and a small pure white spot; the discal band with lunular brown inner border and zigzag black-spotted outer border, the interior being traversed by ferruginous lunular lines; middle of the wing and posterior angle suffused with grey. Thorax and front of head grey; palpi, pectus, and legs blackish-ferruginous; anal tuft blackish. Underside darker ferruginous-brown; both wings with two indistinct dusky oblique bands.

Expanse $2\frac{3}{4}$ inches.

Genus SUANA.

Lebeda (group 8, part), Walker, Catal. Lep. Het. B. M. vi. p. 1462 (1855).
Suana, Walker, *id.* p. 1502 (1855).

Male: forewing long, very narrow; costa very slightly arched towards the end, apex very acute, exterior margin extremely oblique, posterior margin very short and convex; first subcostal emitted at one-half before end of the cell, second and fourth from end of the cell, second bifid at two-thirds from its base, fourth trifid; cell narrow, less than one-third the wing; discocellular inwardly oblique, concave; first median emitted at two-thirds and second at one-fourth before end of the cell, third and fourth from angles at end of the cell; submedian arched at the base: hindwing very short, triangular; costa convex at the base; costal vein situated at a distance from the margin, arched at the base, with two basal spurs ascending obliquely upward towards the margin; subcostal two-branched, first curved upward from half before end of the cell and slightly touching the costal; cell short, extending along middle of the wing; discocellular outwardly oblique; first median emitted at one-third before end of the cell, second and third from the end, third bifid; a submedian and an internal vein. Body very long, abdomen extending more than half its length beyond hindwings, attenuating to the tip, which is tufted; thorax and head conical in front; palpi porrect, thick, obtusely pointed in front; antennæ bipectinated to tip, broadly at the base; femora and tibiæ pilose. Female: forewing larger, similarly shaped, but broader: hindwing longer, with almost straight costal border, the apex rather pointed, exterior margin very oblique. Body very robust; antennæ biserrated.

SUANA BIMACULATA (PLATE 104, FIG. 1, 1*a*, ♂ ♀, 1*b*, larva).

Lebeda concolor et *L. bimaculata*, Walker, Catal. Lep. Het. B. M. vi. p. 1463 (1855), ♂.
Suana ampla, Walker, *id.* vi. p. 1502, ♀.
Suana bimaculata, Moore, Catal. Lep. Mus. E. I. C. ii. p. 428, pl. 13*a*, f. 2, 2*a*, ♂ ♀.

Male. Dark dusky purplish-ferruginous: forewing crossed by five indistinct equidistant blackish sinuous lines, and a submarginal macular line; a small silvery-white spot at end of the cell. Female paler: forewing with similar transverse indistinct blackish sinuous lines, the submarginal being more distinctly macular and grey speckled; the area between the middle lines, and also the outer border washed with purplish-grey; a large silvery-white spot at end of the cell, and a small whitish spot at base of the wing.

Expanse, ♂ $2\frac{3}{8}$, ♀ 5 inches.

Larva. Male greyish-brown, female mostly grey, numerously covered with short longitudinal black strigæ; slightly hairy above, the hairs pale brown, densely tufted with paler, brown-spotted, decumbent hairs along the side below the spiracles, the tufts projecting from warty protuberances; on front of third and fourth segment is a transverse raised protuberance, from each of which a dense short tuft of black hairs projects forward, and on twelfth and last segment is a short conical protuberance, the former of which is hairy. Head black striped. Cocoon greyish-ochreous. Pupa purple-red.

"Feeds on *Careya arborea*, &c." (*Dr. Thwaites.*)

SUANA CERVINA (PLATE 139, FIG. 2, ♀, 2*a*, larva).

Suana cervina, Moore, Proc. Zool. Soc. 1879, p. 410, ♀.

Female. Upperside dark brownish-fawn colour: forewing grey speckled, crossed by four indistinct medial transverse dusky lunular bands, the two inner bands bent across the cell towards base of costa; an outer submarginal band of blacker and broader pale-bordered lunules; a grey-white spot at base of wing and a prominent large silvery-white spot at end of the cell: hindwing with a very indistinct dusky brown submarginal fascia. Thorax, head, and palpi dark purplish-black; tibiæ and tarsi above black. Abdomen reddish. Antennæ grey. Underside uniform brownish-fawn colour.

Expanse $3\frac{3}{4}$ inches.

Larva purplish-grey, numerously covered with slender black strigæ, a subdorsal black oblique streak on fifth to twelfth segment, and an angulated spotted line below the spiracles; sublateral continuous tufts of decumbent hairs grey, speckled with white; dorsal crested tufts on third and fourth segment black, posterior conical tuft hairy. Cocoon greyish-ochreous. Pupa purplish-red.

Family COSSIDÆ.

Wings long, mostly narrow. Antennæ bipectinated to tip or broadly bipectinated at base in male, and serrated in female; abdomen long, stout; ovipositor exserted.

Larva elongate, naked, or with a few fine short straggling hairs; with a horny plate on second segment. Feeds in the wood of trees or stems of reeds. Pupates within the cell or bore of the larva. Pupa with short segmental spines.

Genus HINNÆYA.

Wings and body more laxly scaled than in Chalcidica (*C. Mineus*, Cram.). Forewing long in both sexes, comparatively broader across the disc, the apex more pointed, and the exterior margin straight; venation similar; cell longer at upper end; first subcostal emitted further from end of the cell; discocellulars shorter, the angles of both upper and lower equidistant: hindwing also comparatively broader; apex more pointed; venation similar, except that the upper discocellular is disconnected from the subcostal vein; discocellulars erect, angles equidistant. Body stouter, thorax longer; palpi porrect, slender, smooth, extending to front of the eyes, pointed at tip; antennæ deeply bipectinated at base, serrated at end.

Type, H. Strix (*Phal. Noct. Strix*, Linn.).

HINNÆYA LEUCONOTA (Plate 142, Fig. 3, 3*a*, ♂ ♀).

Zeuzera leuconota, Walker, Catal. Lep. Het. B. M. vii. p. 1537 (1856).

Forewing pale vinous greyish-brown, with short black irregular strigæ between the veins, those beyond lower end of the cell forming a lengthened quadrate black spot, and others across the disc are more or less confluent and form an ill-defined discal band, which is mostly apparent in the female; the posterior border and apex is irregularly greyish-white, on which the black strigæ are more strongly seen: hindwing pale vinous greyish-brown, with black strigæ between the outer veins, the strigæ being thickly contiguous in the male; a greyish-white patch along middle of exterior border. Thorax above greyish-white; abdomen dark greyish-brown, tip and lateral spots greyish-white; front of thorax, head, palpi, and legs dark greyish-brown.

Expanse, ♂ 4½, ♀ 6 inches.

Genus ZEUZERA.

Zeuzera, Latreille, Hist. Nat. des Ins. xiv. p. 175 (1802).
Latagia, Hübner, Verz. bek. Schmett. p. 196 (1818-25).

Forewing elongated, narrow; costal and subcostal veins very close together at the base; cell long, extending two-thirds the wing; subcostal five-branched, first

branch emitted at one-half before end of the cell, second, third, and fourth from end of the cell, fourth bifid at beyond one-half its length; discocellular inwardly oblique, bent below the middle, emitting a discoidal veinlet within the cell from the angle, which extends to base of the cell and emits a short branch, at about one-third from its end, to the median between the second and third branches, a second or upper discoidal veinlet is also emitted from the discocellular above the angle, which joins the subcostal before the first branch; radial emitted from the discocellular opposite the upper discoidal veinlet; median four-branched, first or lower branch emitted beyond one-half, second at one-third, and third at one-tenth before end of the cell; submedian and internal vein recurved and joined together at the base, the internal with a lower branch at one-fifth from the base: hindwing rather long and narrow; costal vein absent; subcostal extending near the margin to near the apex; cell extending to two-thirds the wing; discocellular bent near upper end, emitting a discoidal veinlet within the cell, from the angle, which is joined to subcostal, and a lower discoidal veinlet is also emitted from about one-half below the angle, and from which a short branch extends from one-third its length to the median between the second and third branches; two radials, the upper from the discocellular above upper discoidal veinlet, lower radial from opposite lower discoidal veinlet; median four-branched, first or lower branch emitted at one-half, second at about one-third, and third from angle close to but below end of the cell; a submedian and two internal veins. Body long, thick, woolly; palpi very short, pilose; antennæ in male broadly bipectinated to two-thirds its length, end serrated, antennæ in female minutely serrated to tip, the pectinations ciliated in male, simple in female; legs laxly pilose beneath; ovipositor exserted.

ZEUZERA COFFEÆ (Plate 143, Fig. 1, 1*a*, ♂ ♀, 1*b*, larva).

Zeuzera Coffeæ, Nietner, Observations on Enemies of the Coffee Tree in Ceylon, p. 21 (1861).

Ochreous-white: forewing with short transverse steel-blue spots between the veins, and a marginal row of triangular spots: hindwing with a marginal row of similar spots, and a few slender strigæ between the veins in the female. Thorax white, black spotted above; abdomen white with slender red segmental bands and transverse blue streaks; legs bluish-brown, femora and tibiæ white beneath; antennæ brown, the branches ciliated with white.

Expanse, ♂ $1\frac{1}{8}$, ♀ $1\frac{6}{8}$ inch.

Larva red, with a few short fine hairs; horny plate on second and anal segment black. Pupa red, the segments spined.

"Attacks the Coffee-trees in Ceylon, destroying many trees, young and old, the larva eating out the heart; for this purpose it generally enters the tree six or twelve

inches from the ground, and eats its way upwards. The sickly drooping foliage, and a heap of wood dust at the foot of a tree, soon indicates that the caterpillar is carrying on its destructive work inside. The pupa rests three months, and the skin half protrudes from the hole when the moth escapes, which is about February." (*Nietner.*)

ZEUZERA NIGRA (Plate 143, Fig. 2, ♀, *2a*, larva).

Zeuzera nigra, Moore, Annals of Natural History, 1877, p. 348.

Female: black; both wings and thorax numerously speckled with minute white scales. Wings narrow, acute at the apex. Body long and slender.

Expanse $1\frac{4}{8}$ inch.

Larva flesh colour, with lateral pink marks, horny plate on second segment dark coloured. Pupa reddish, segments spinous.

"Burrows in the root of the Coffee-tree." (*Dr. Thwaites.*)

Genus ARBELA.

Arbela, Moore, Proc. Zool. Soc. 1879, p. 411.

Forewing elongated; first subcostal emitted at one-third, and second at one-sixth before end of the cell, third from immediately above end of the cell, trifid, the fourth from below third at one-third from the base, the fifth from below fourth at half before the apex; upper discocellular longest, inwardly oblique, lower bent outward, upper radial from end of the cell, lower from angle of lower discocellular; a discoidal veinlet emitted within the cell from inner angle of discocellular; three median branches, lower branch emitted at one-third, and second at one-fifth before end of the cell; submedian slender, much recurved, internal vein with a basal short lower branch: hindwing short; exterior margin very convex; cell wide; costal vein extending to near apex; first subcostal emitted at one-fourth before end of the cell, short, joined to the costal; discocellular bent acutely in the middle and slightly at each end, a radial from upper and lower ends, a discoidal veinlet emitted within the cell from inner angle of discocellulars; three median branches, first or lower at one-half, and second at one-sixth before end of the cell; a submedian and two internal veins. Body moderate, long, hairy, with short lateral and anal tufts; palpi minute; antennæ short, bipectinated, the branches short; legs short, pilose above.

Type, A. tetraonis.

ARBELA QUADRINOTATA (Plate 143, Fig. 3, ♂).

Cossus quadrinotatus, Walker, Catal. Lep. Het. B. M. vii. p. 1521 (1856).

Male. Cinereous-white: forewing with short brown strigæ between the veins, a large brown spot at end of the cell, two broad streaks below the cell, and a broken

discal band: hindwing with paler brown strigæ between the veins. Body cinereous-white, with brown tufted edgings; antennæ and legs brownish-white.

Expanse $1\frac{3}{8}$ inch.

Family HEPIALIDÆ.

Wings long; hindwings nearly as long as the forewings. Antennæ simple; abdomen long, slender; proboscis and palpi obsolete.

Larva elongated, naked; with a horny plate on second segment. Feeds on the roots of plants. Pupa subterranean; with short spines on the segments.

Genus PHASSUS.

Phassus, Walker, Catal. Lep. Het. B. M. vii. p. 1566 (1865).

Forewing long, narrow; subcostal five-branched; first subcostal emitted at nearly two-thirds before end of the cell, second and fourth from near the end, second bifid near the end; upper discocellular outwardly oblique, bent in the middle, lower short; upper radial from the angle and lower radial from end of upper discocellular; a discoidal veinlet emitted within the cell from opposite lower radial and joined to the median close to its lower branch; median with three branches, its lower branch emitted at two-thirds before end of the cell, middle and upper branch from end of the cell, middle branch bent at one-fourth from its base and joined by a cross branchlet to lower median; submedian short, arched at the base and forked at its end; internal vein arched at its base and emitting a short basal branch; lower fork of submedian joined to internal vein at a short distance beyond the lower branch, a short cross branchlet also runs from base of lower median to middle of the submedian and thence across to internal vein above middle of the lower branch: hindwing almost as long as forewing; first subcostal emitted at one-half before end of the cell, second at one-fourth, bifid at two-thirds from its end, fourth from immediately before end of the cell; discocellular, discoidal, radials, and medians disposed as in forewing, except that the discoidal and median, which are joined together near the base and run into the subcostal, the lower median branch being free and its end starting from base of the subcostal; a submedian and two internal veins. Body very long, slender, head and thorax laxly pilose, abdomen almost smooth, thorax narrowed in front, head small; palpi not visible; antennæ short, slender, setulose; fore and middle legs rather long and laterally pilose to end of the tarsi, hind legs short, less pilose.

PHASSUS PURPURESCENS (Plate 143, Fig. 4).

Male. Pale purplish greyish-brown: forewing with some pale-bordered dark brown spots along middle of the costal border; a medial dark brown irregular

recurved stripe within the cell, at the basal end of which is a yellow lunular spot, and at the outer end a lobate spot followed by three or four small round yellow spots; some minute yellow spots also below the apex; beneath inner end of the stripe is a continued triangular brown patch; a small pale-bordered brown spot below base of the cell, and across the disc and margin are two pale brown lunular bands with intervening greyish streaks: hindwing uniformly darker brown. Body and legs purplish greyish-brown.

Expanse, ♂ $4\frac{5}{8}$ inches.

The type specimen of this insect—the only one known to me—is in the British Museum Collection.

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Xanthestes, Rambur, 68.
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Gortys, Hübn. 17.
Oldenlandiæ, *Fabr.* 17.
pinastrina, *Martyn*, 18.
prunosa, *Butler*, 18.
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Coffeæ, *Nietner*, 154.
leuconota, Walker, 153.
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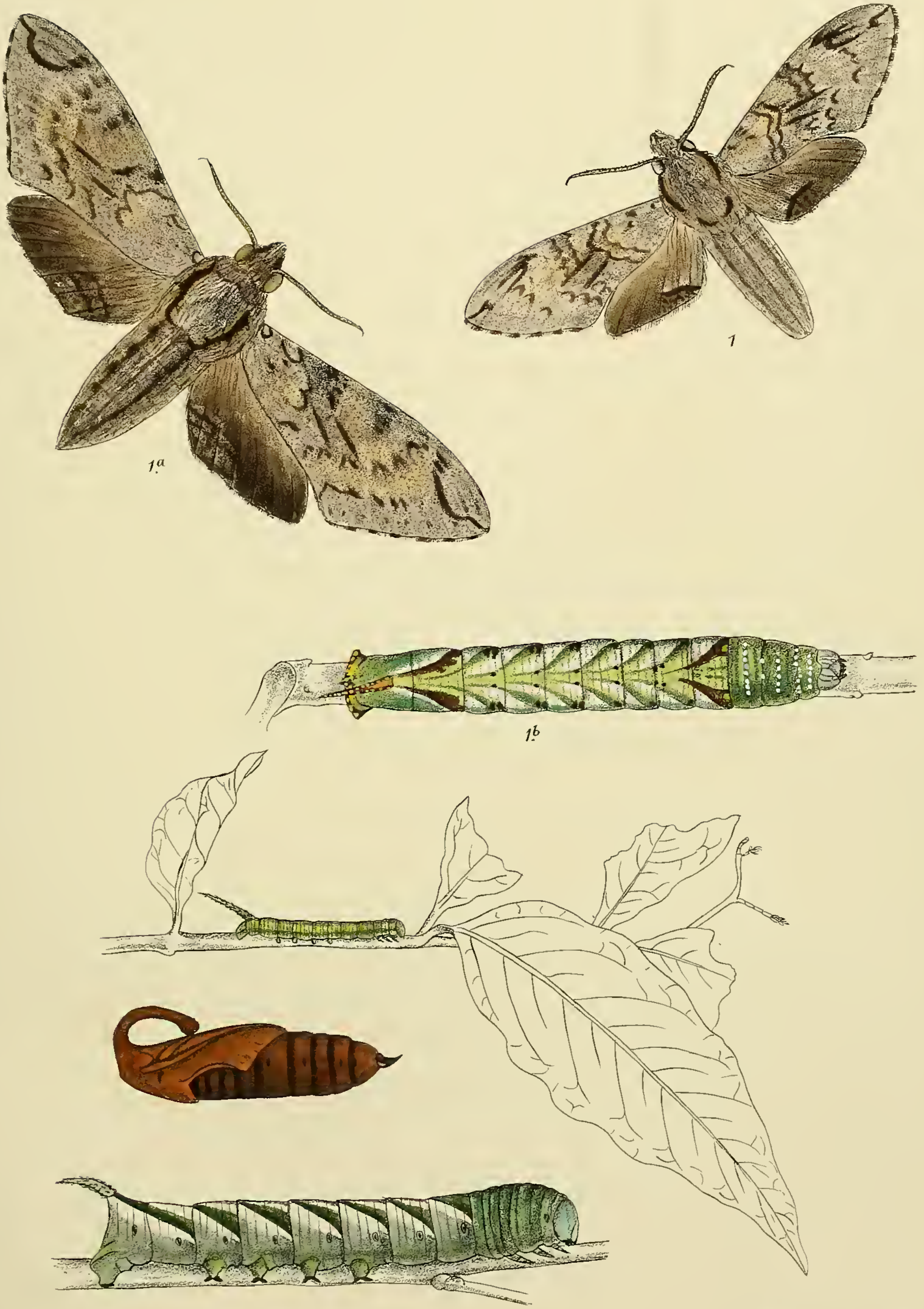
ZYGÆNIDÆ, 34.
ZYGÆNINÆ, 37.

F.C. Moore del et Lith.

Vincent Brooks Day & Son Imp

L. Reeve & Co. London,

Pl. 73.



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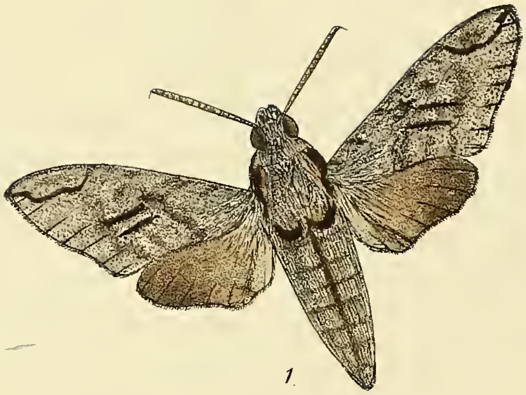
Vincent Brooks Day & Son Imp

L. Reeve & Co. London.



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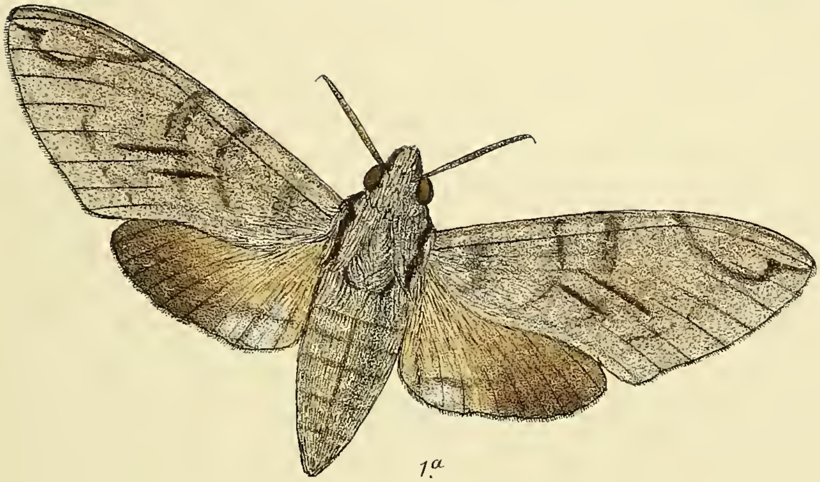

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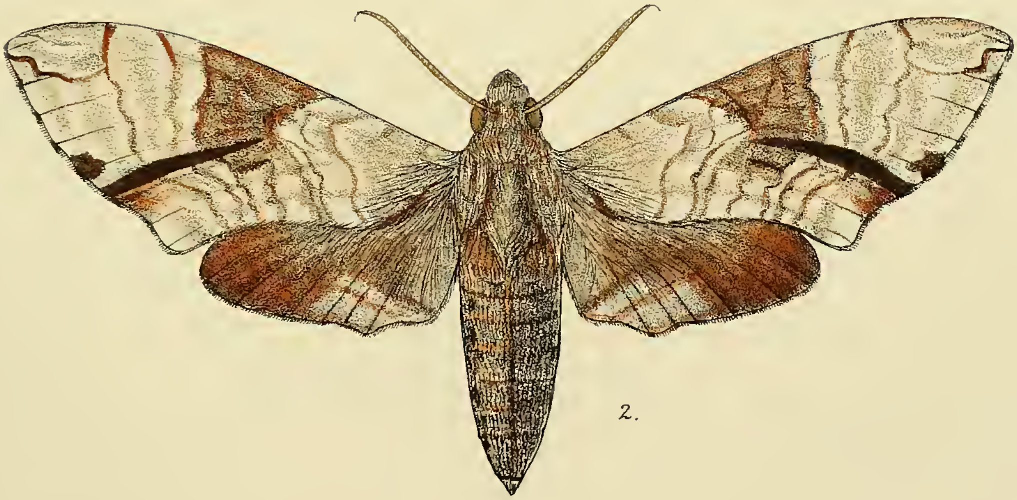

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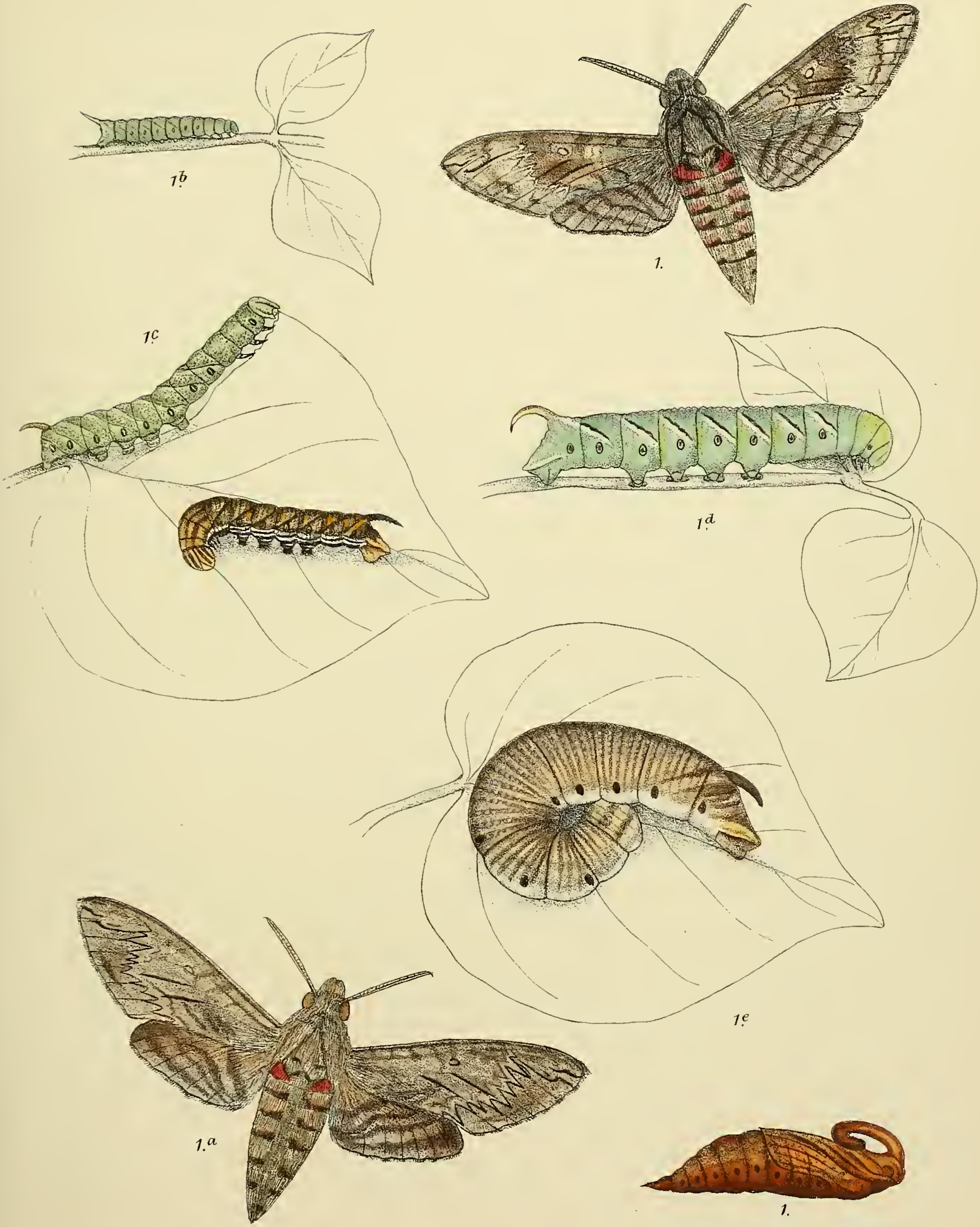

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F. C. Moore del et Lith

Vincent Brooks Day & Son Imp

L. Reeve & Co. London.

F.C. Moore del et Lith

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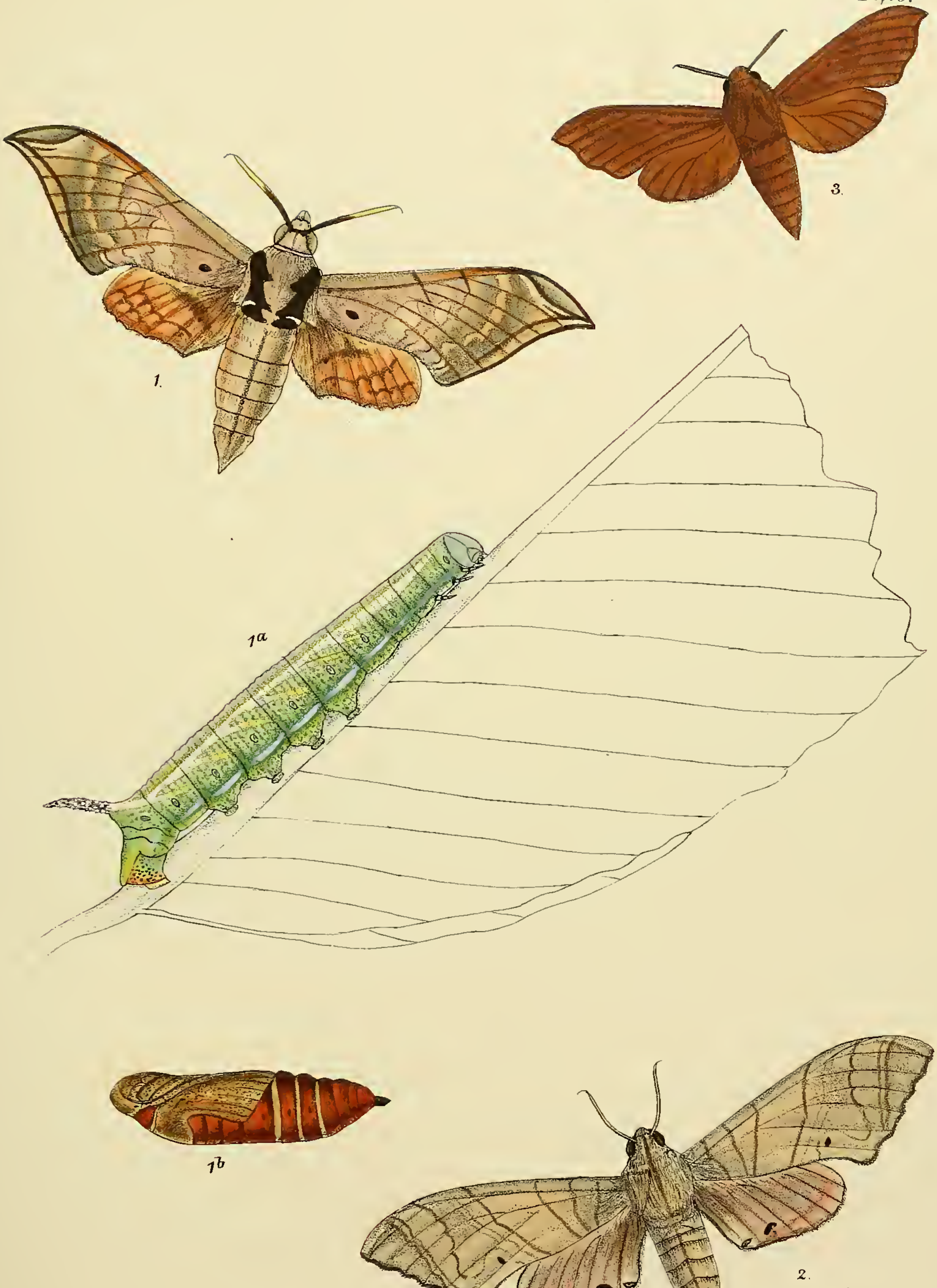
Pl. 78.

F. C. Moore del. et Lith

Vincent Brooks Day & Son Imp

L Reeve & C.o London.

Pl. 79.



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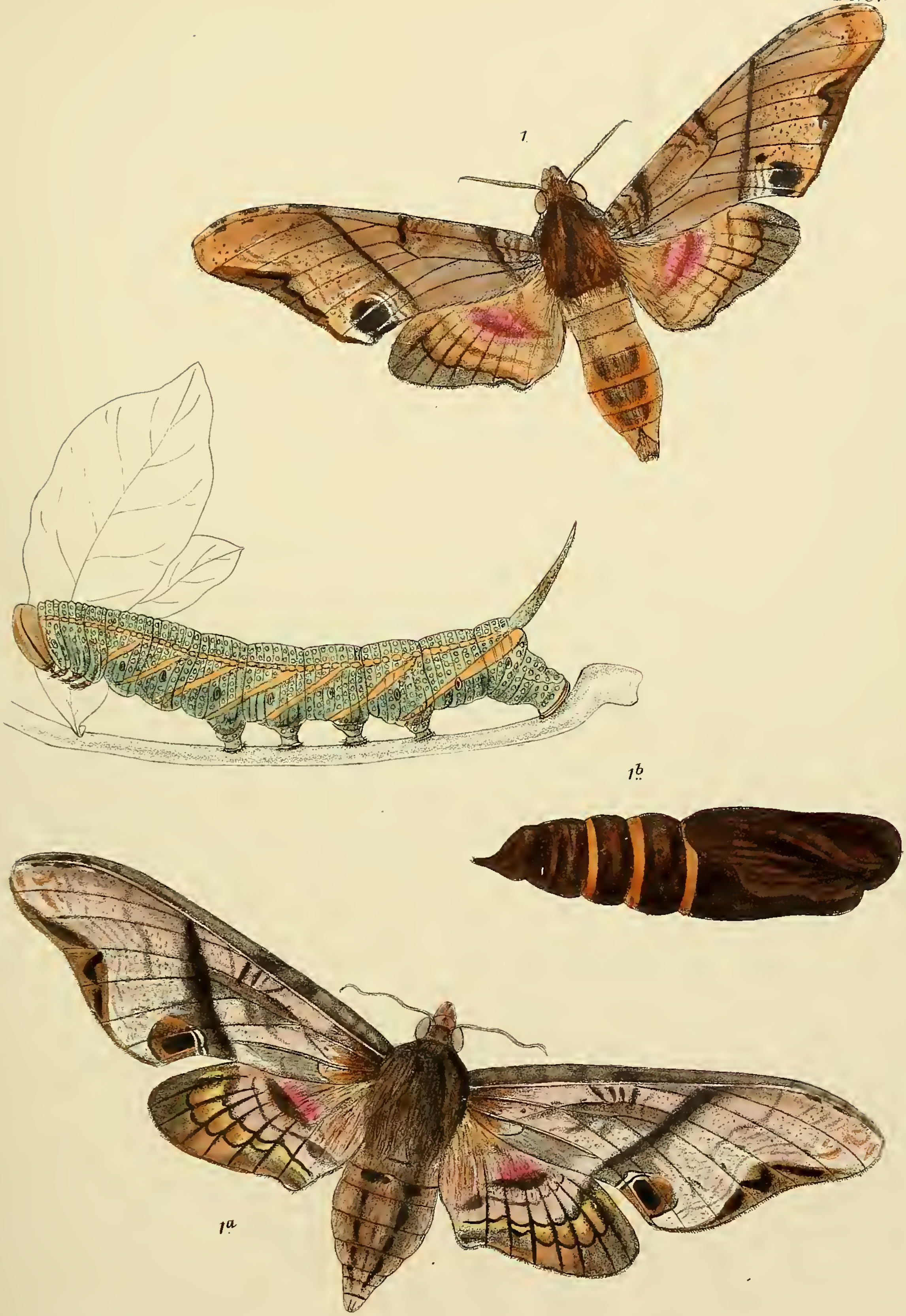
F.C. Moore del. et Lith

Vincent Brooks Day & Son Imp.

L. Reeve & C[o]. London.



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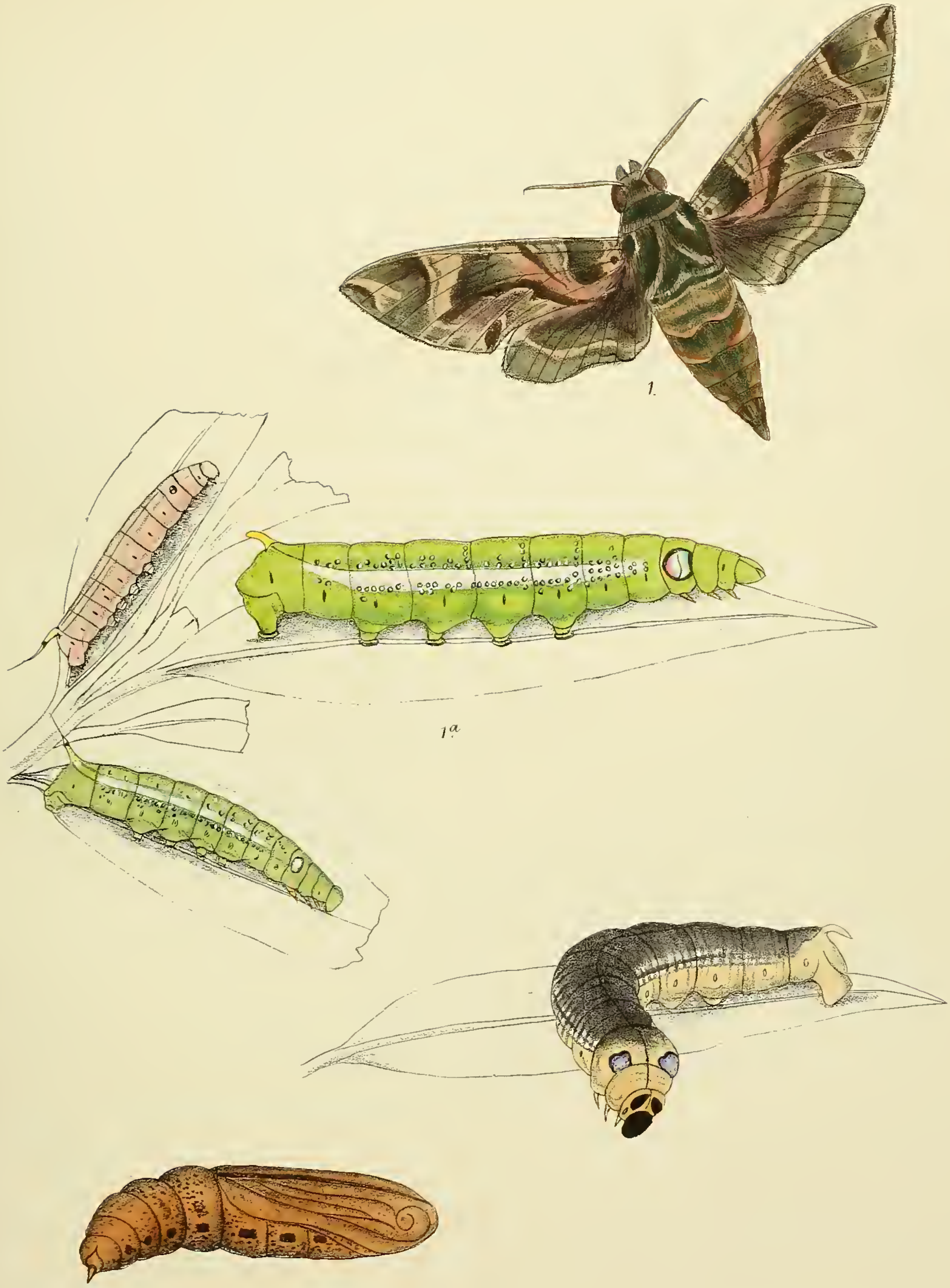
L. Reeve & Co. London,



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L. Reeve & Co. London

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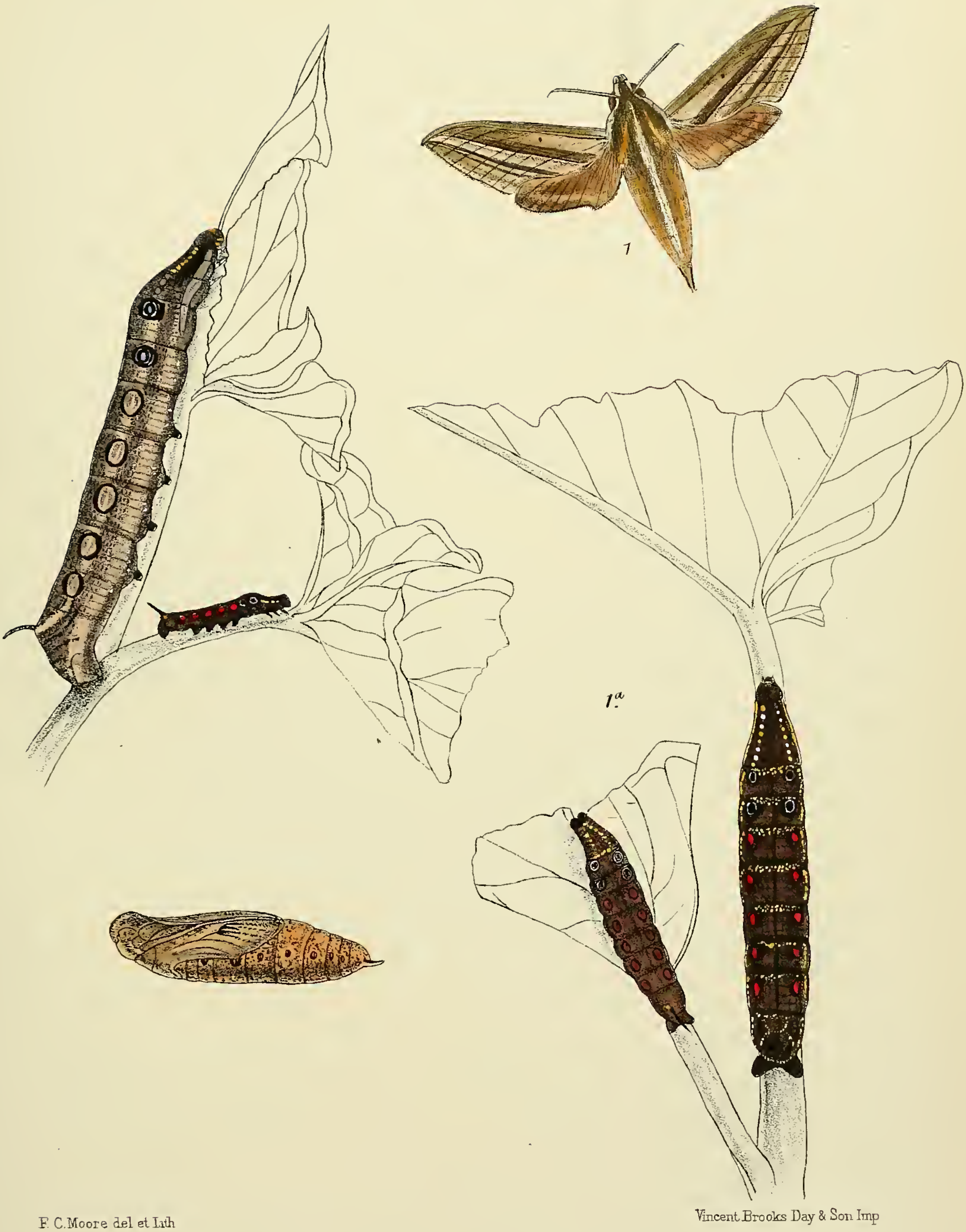

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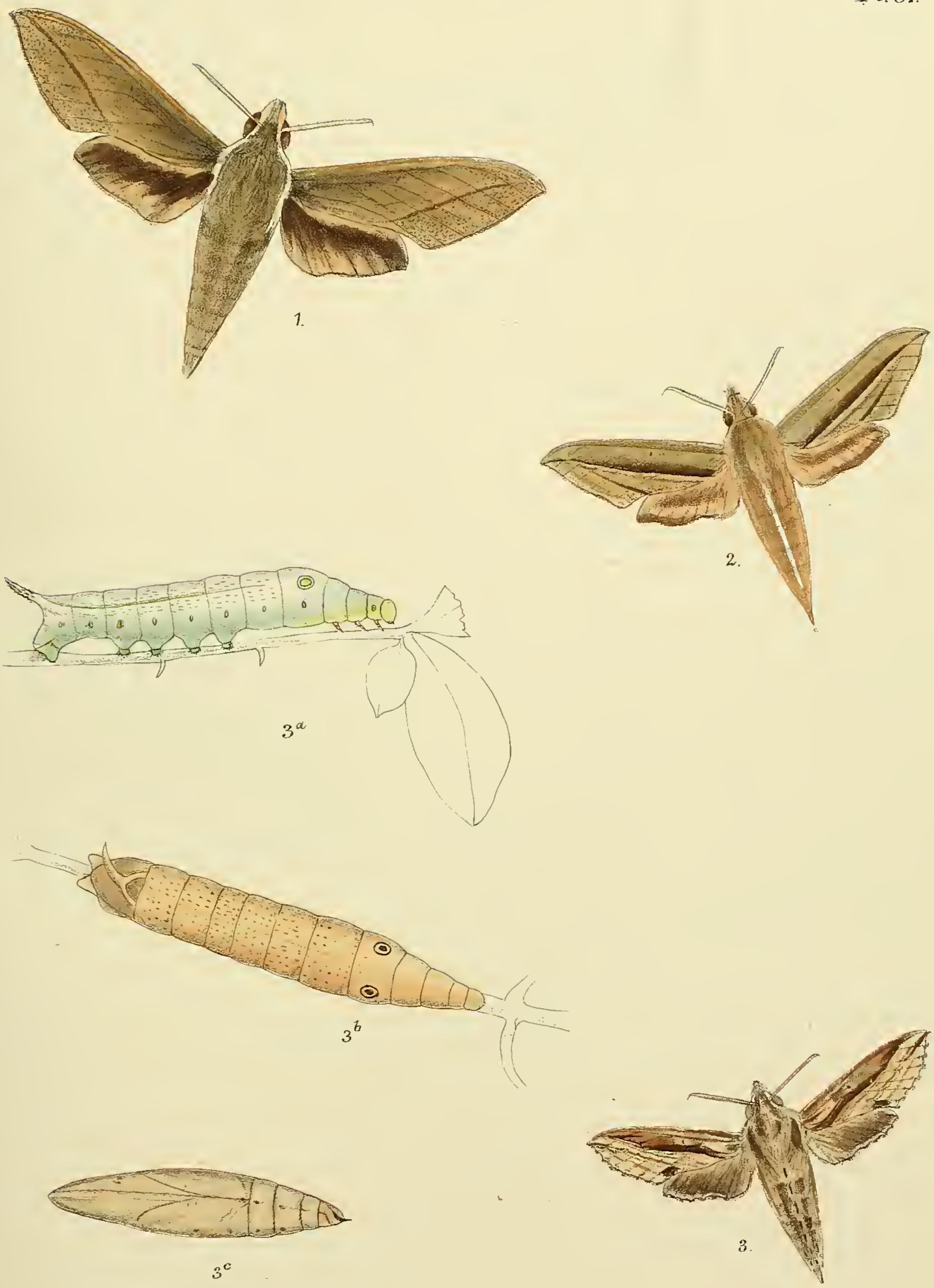
Pl. 86.

F. C. Moore del et Lith

Vincent Brooks Day & Son Imp

L. Reeve & C°. London



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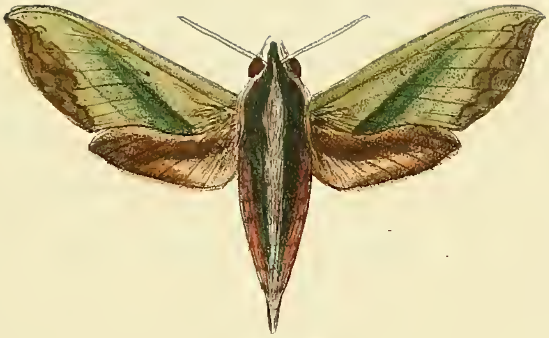
Pl. 88.



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F. C. Moore del, et Lith.

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Pl. 90.

F.C. Moore del et Lith

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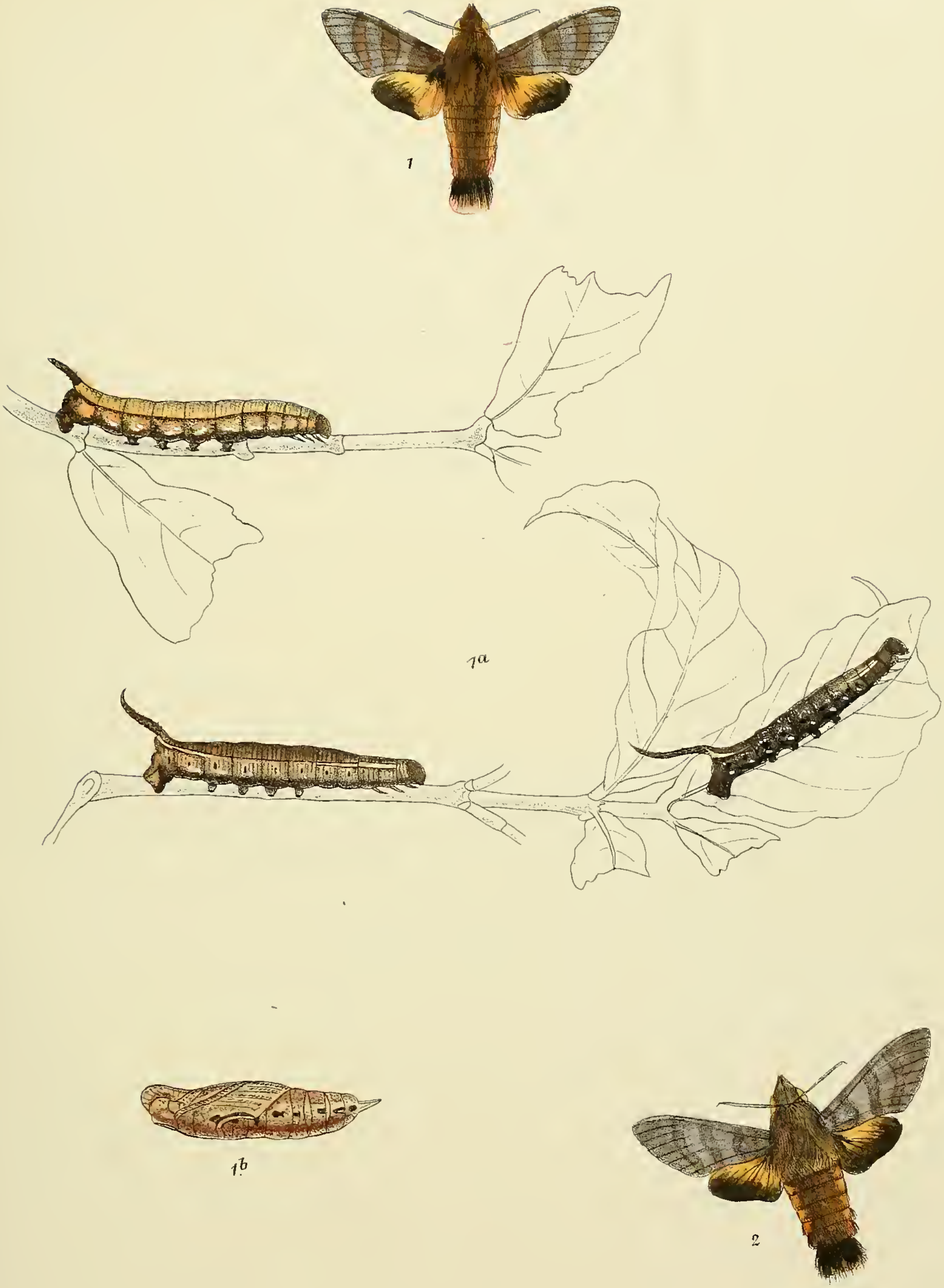

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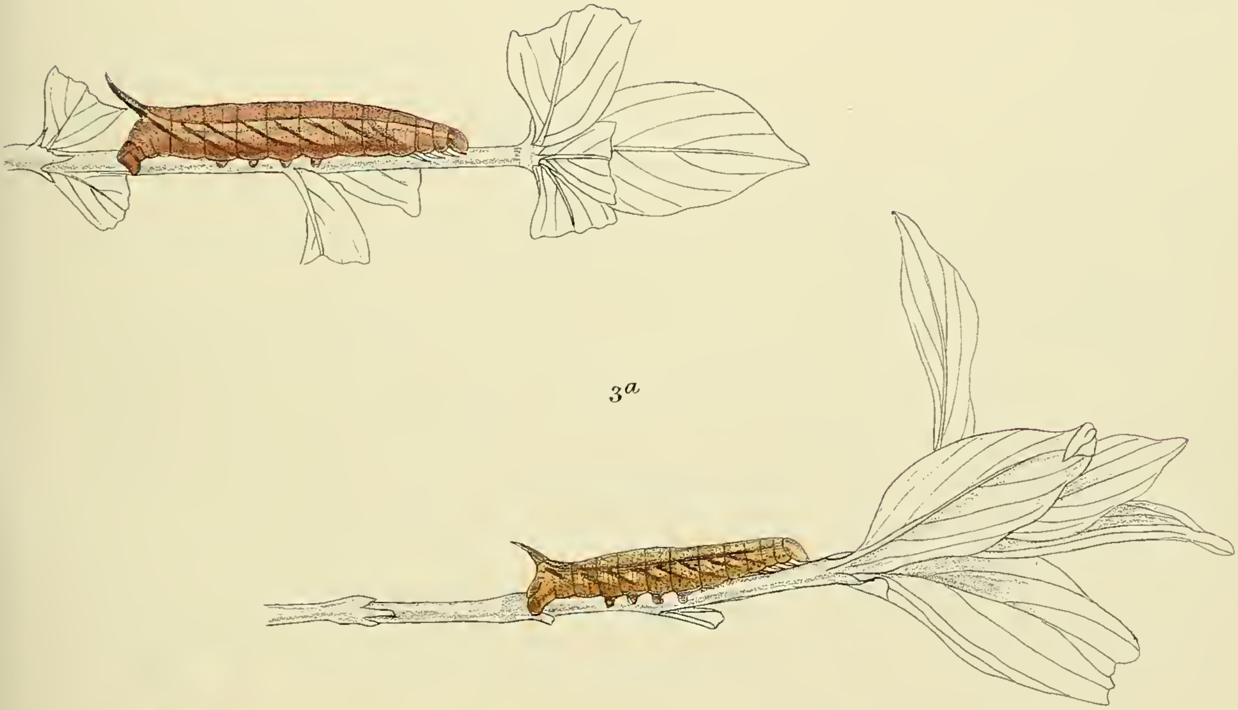

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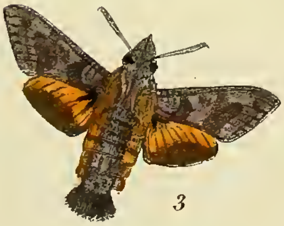

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3b

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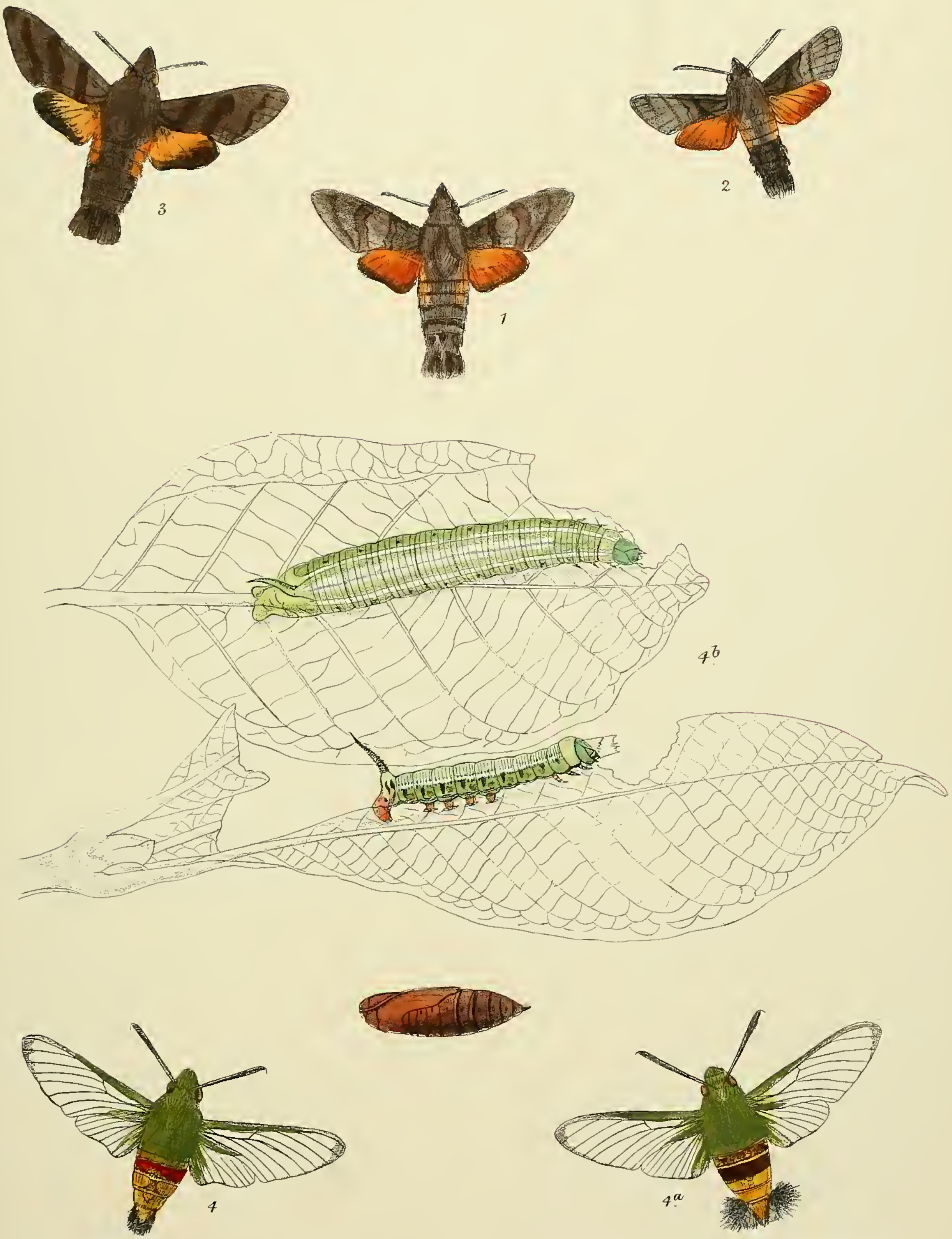

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Pl. 95

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F. C. Moore del. et Lith.

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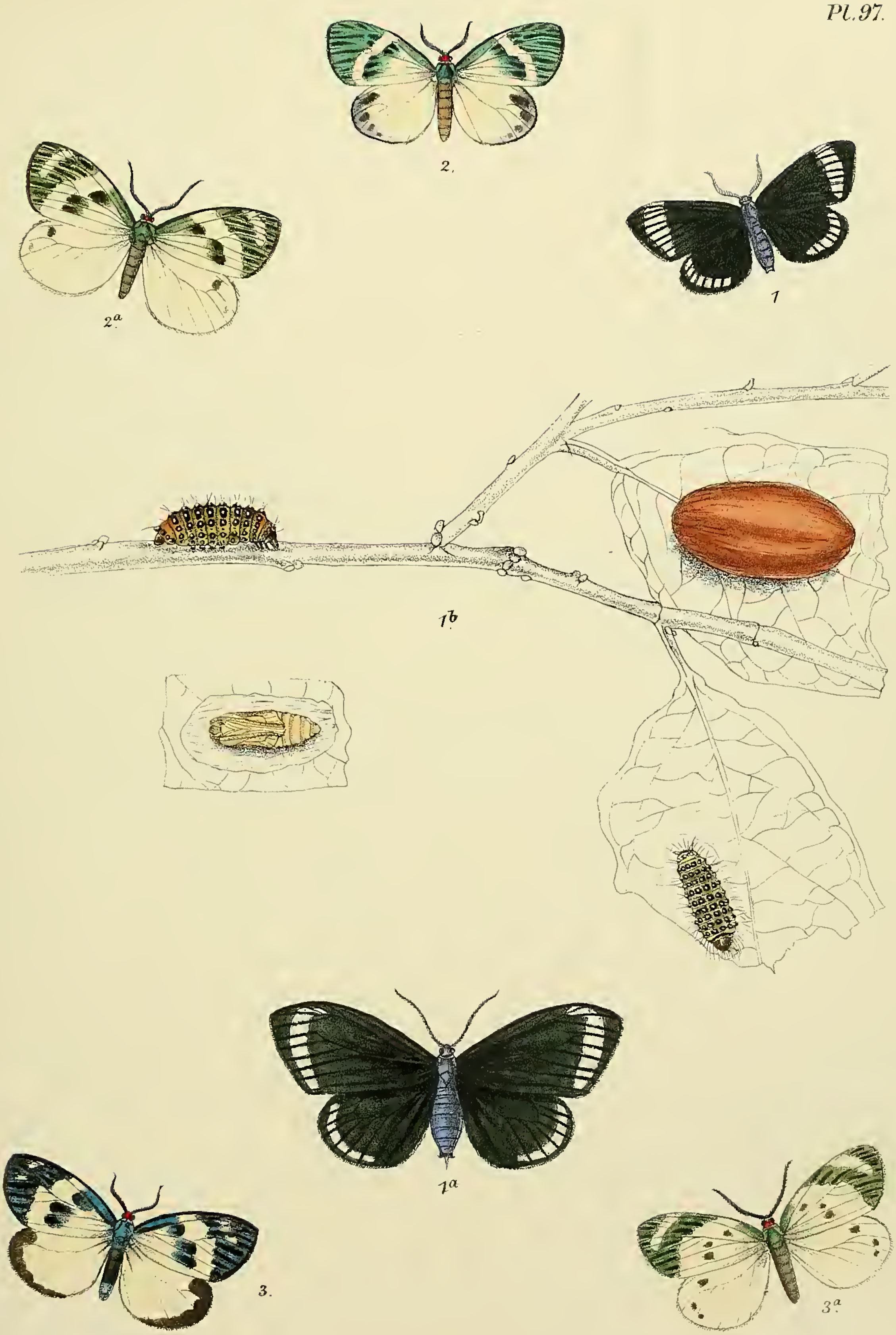

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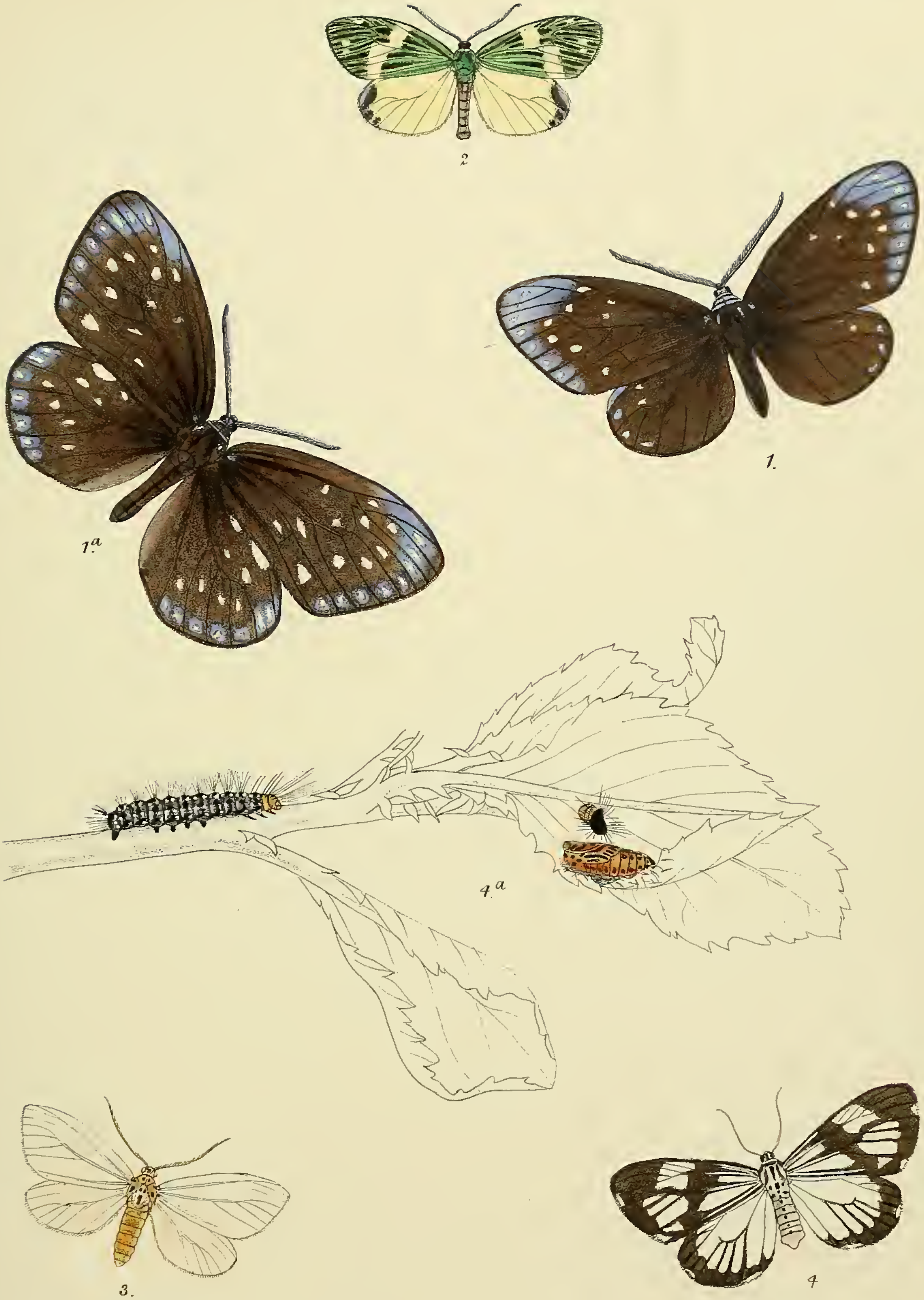

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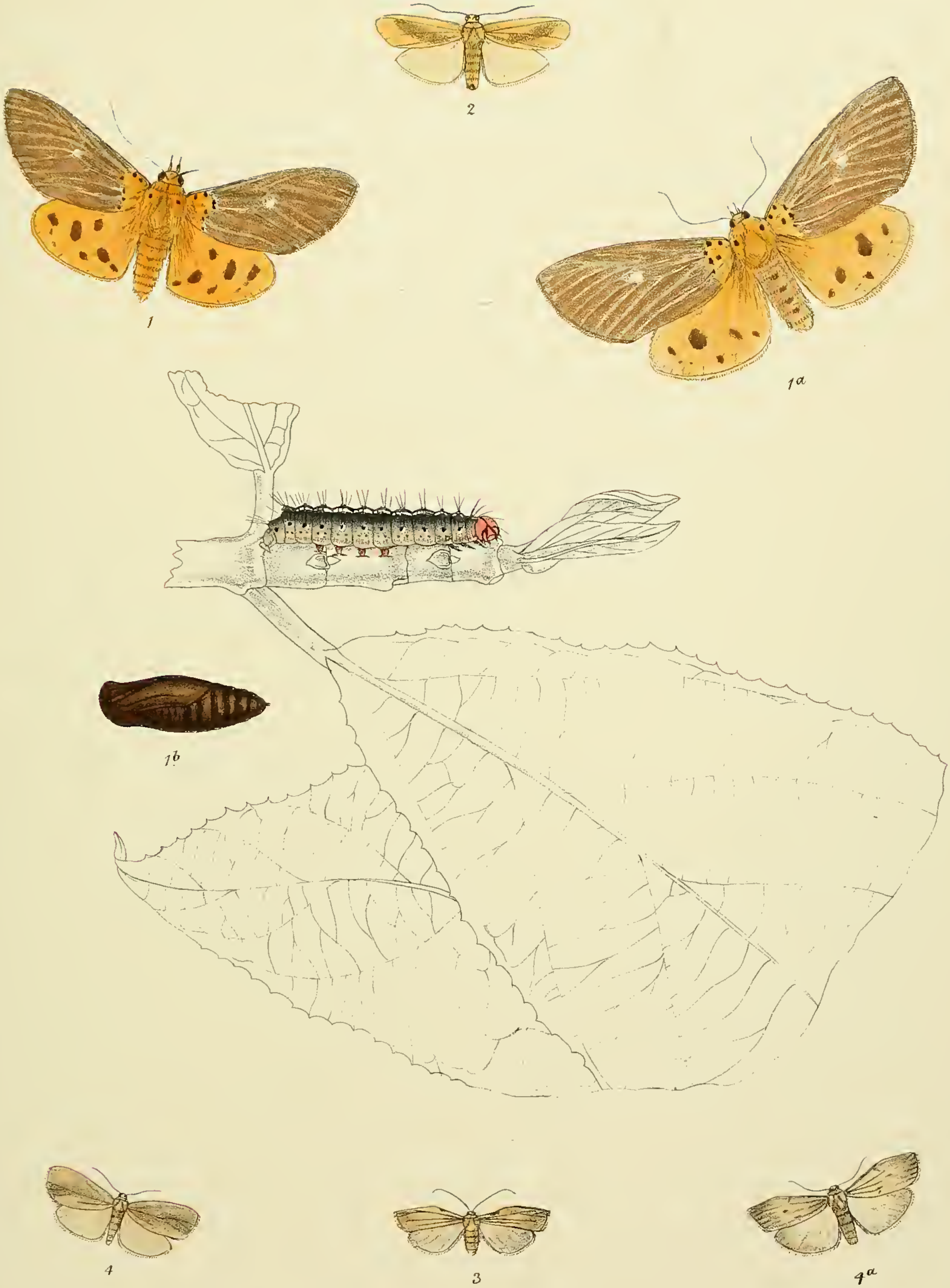

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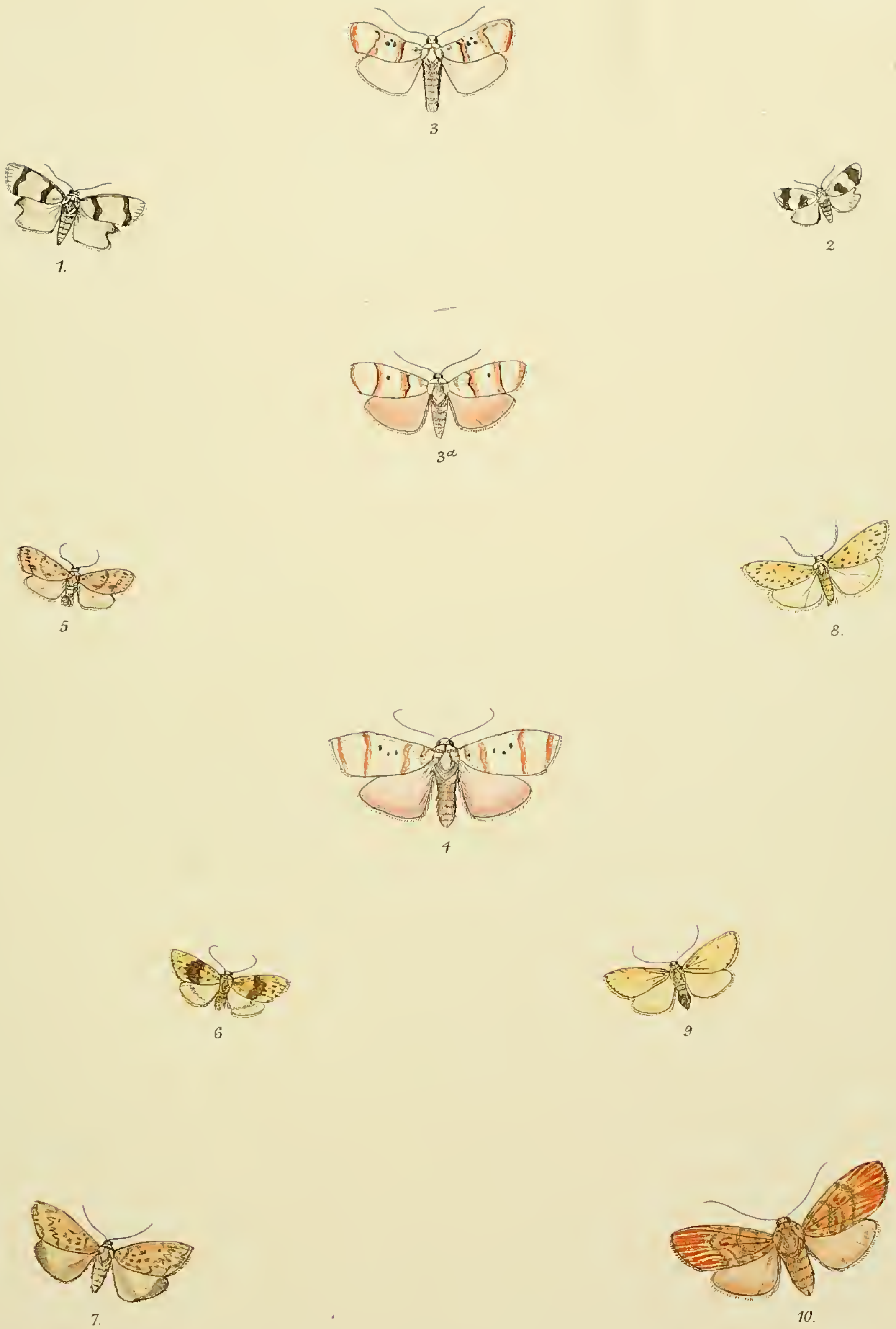

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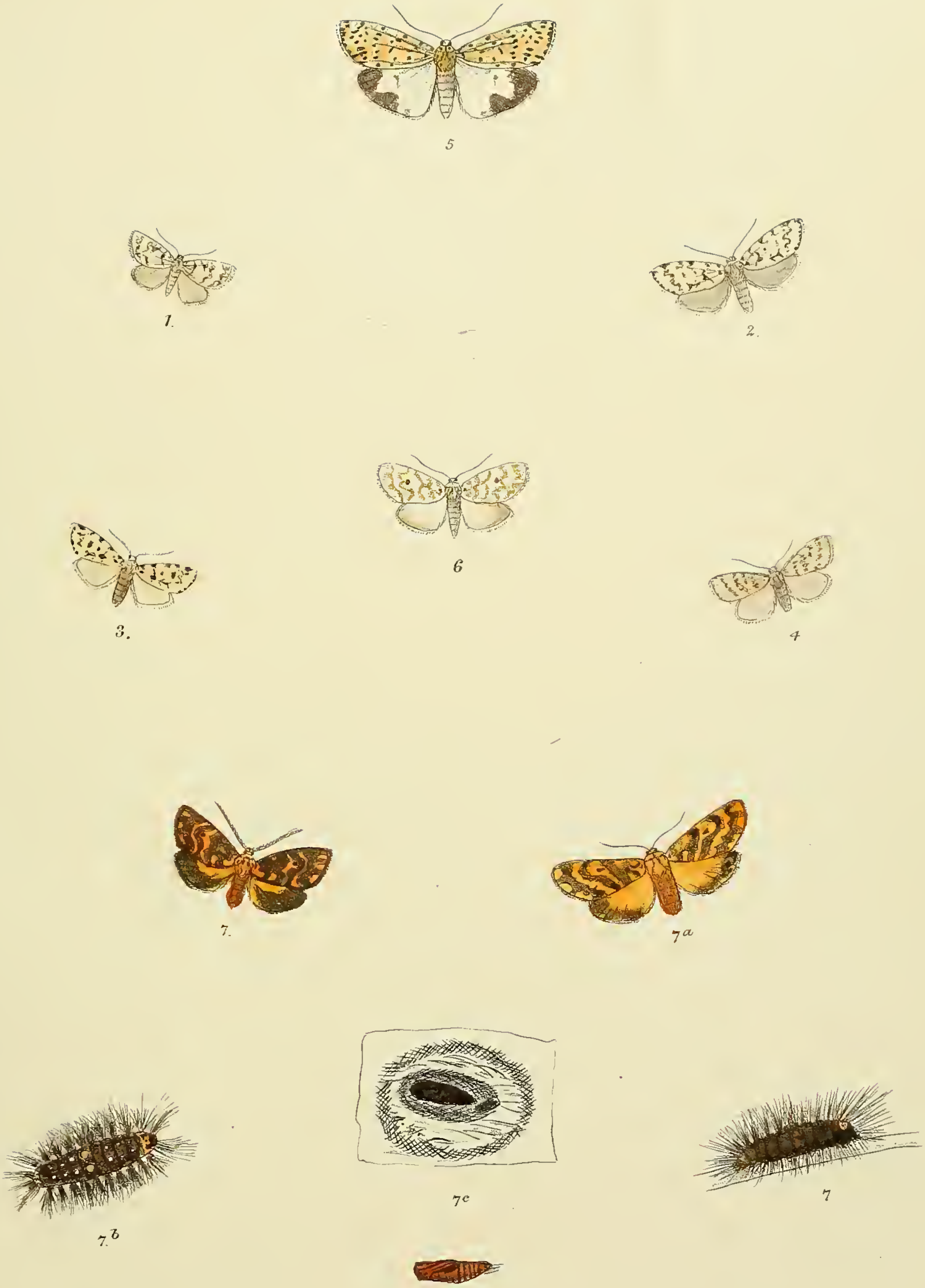

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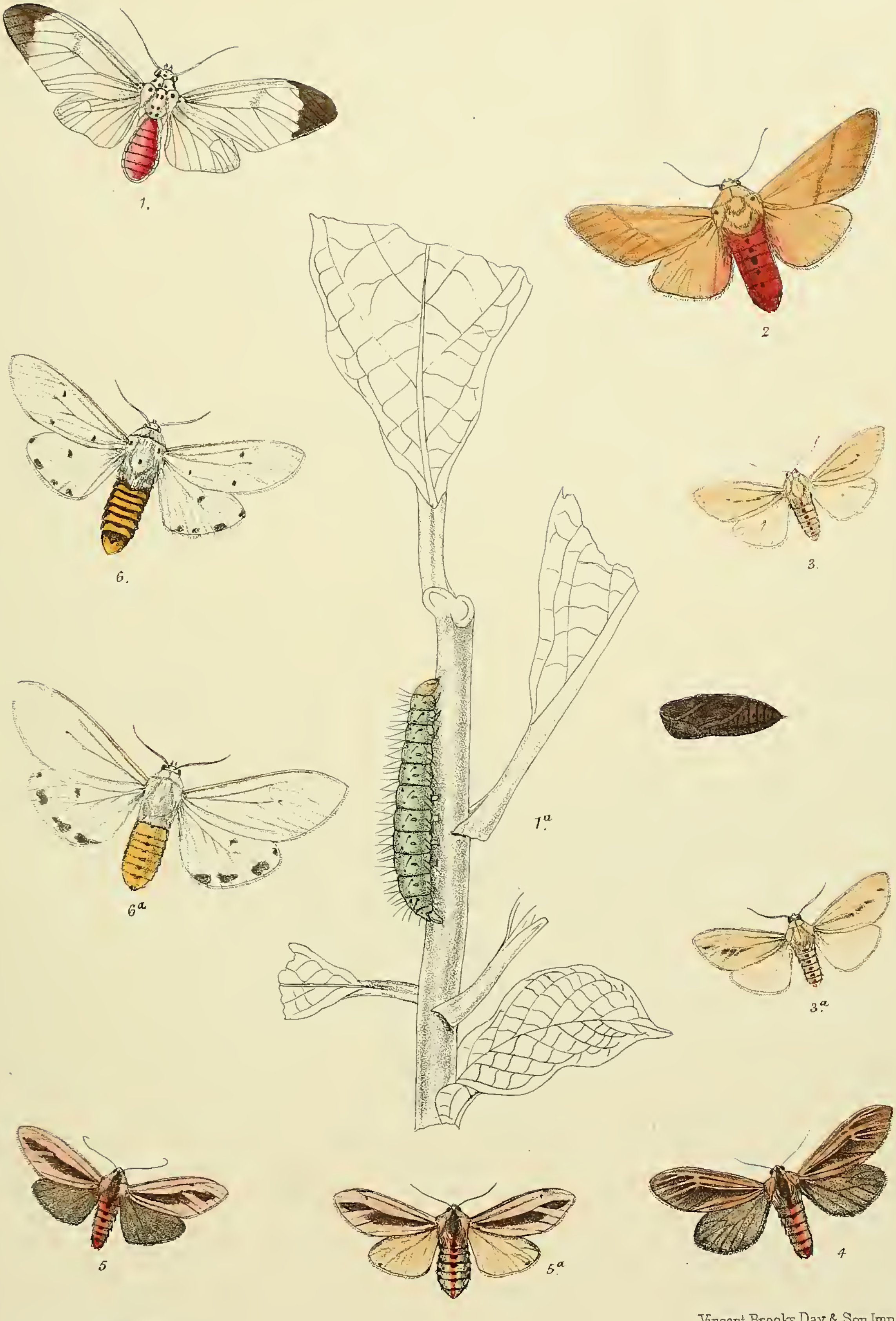

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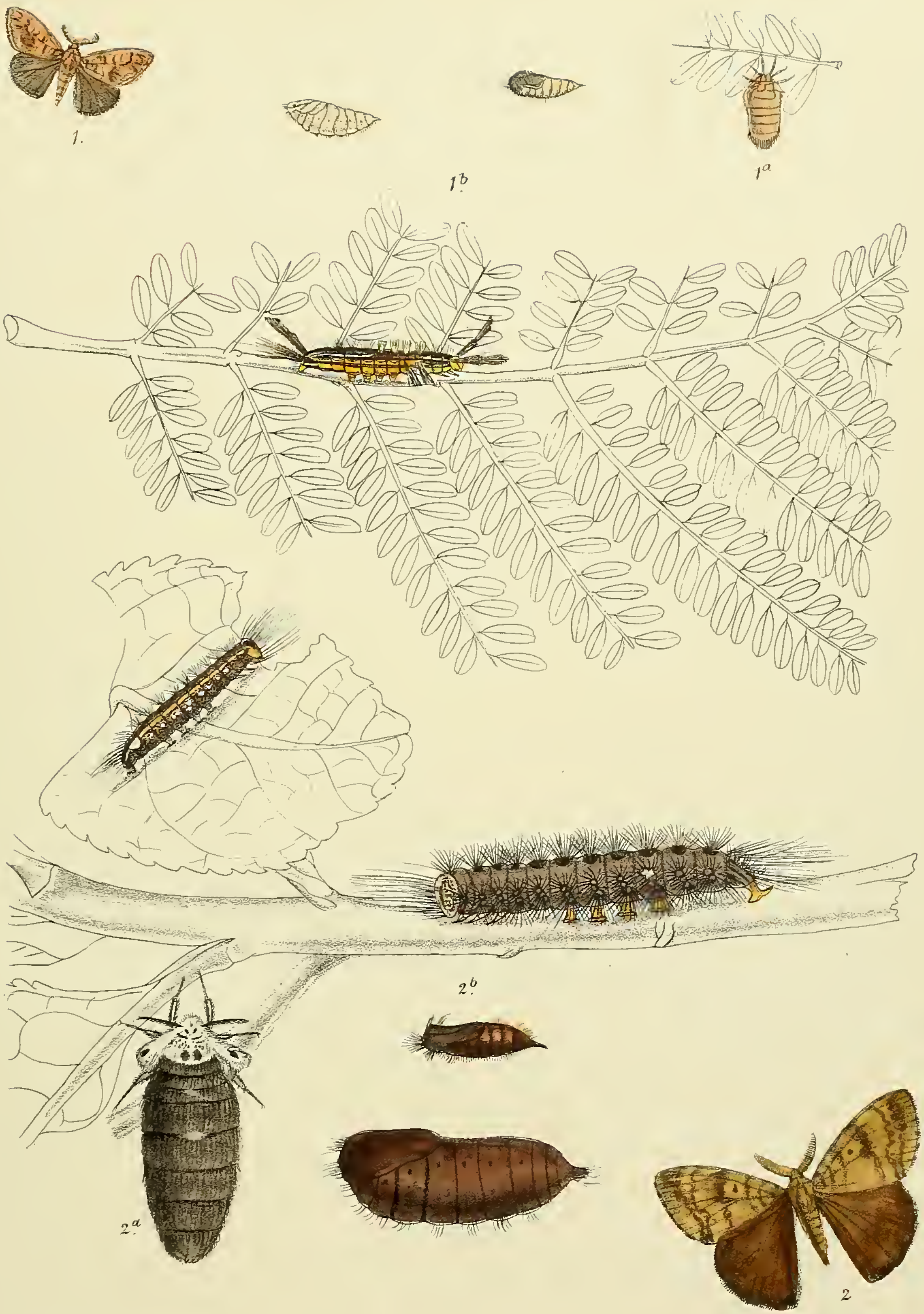

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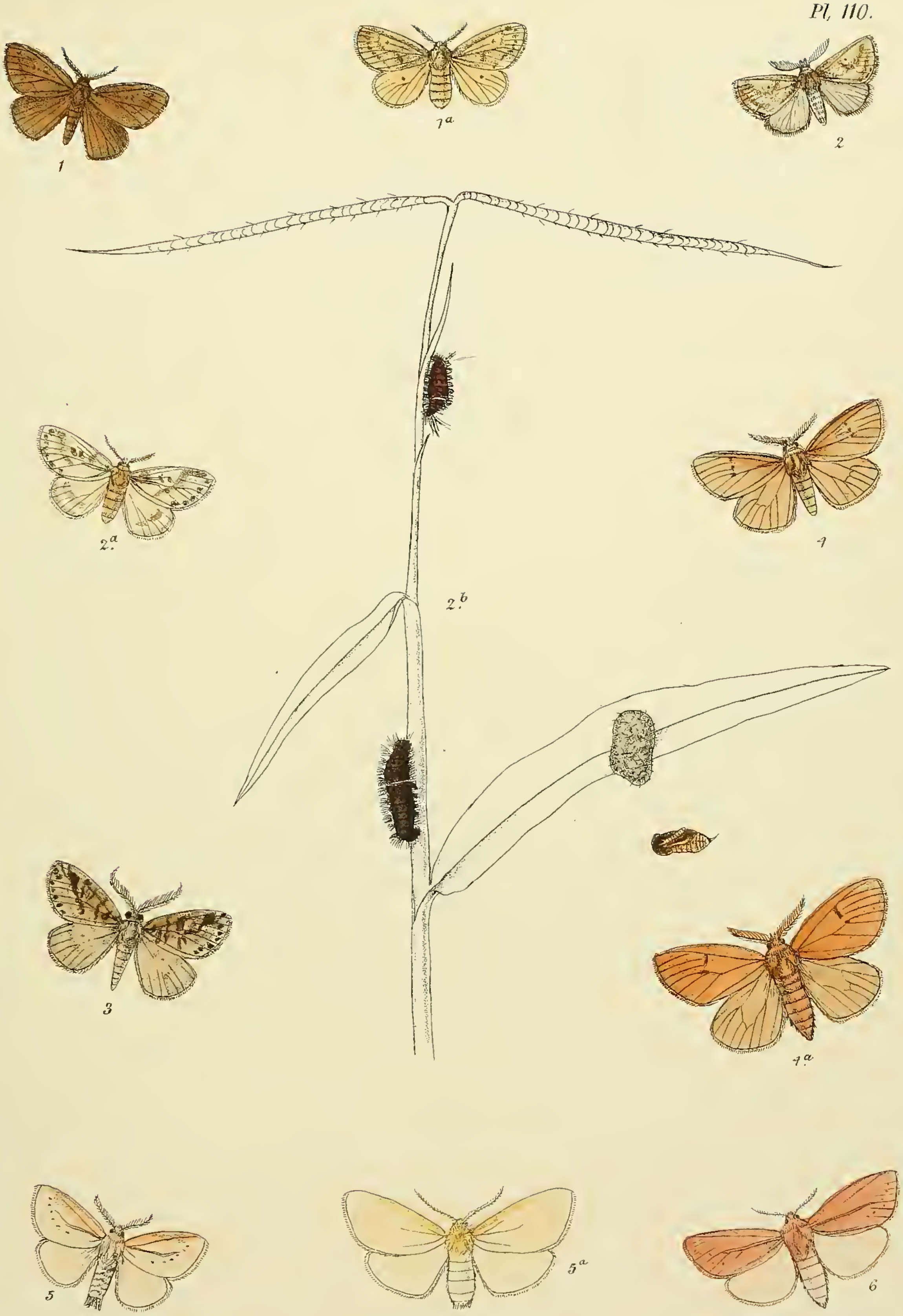

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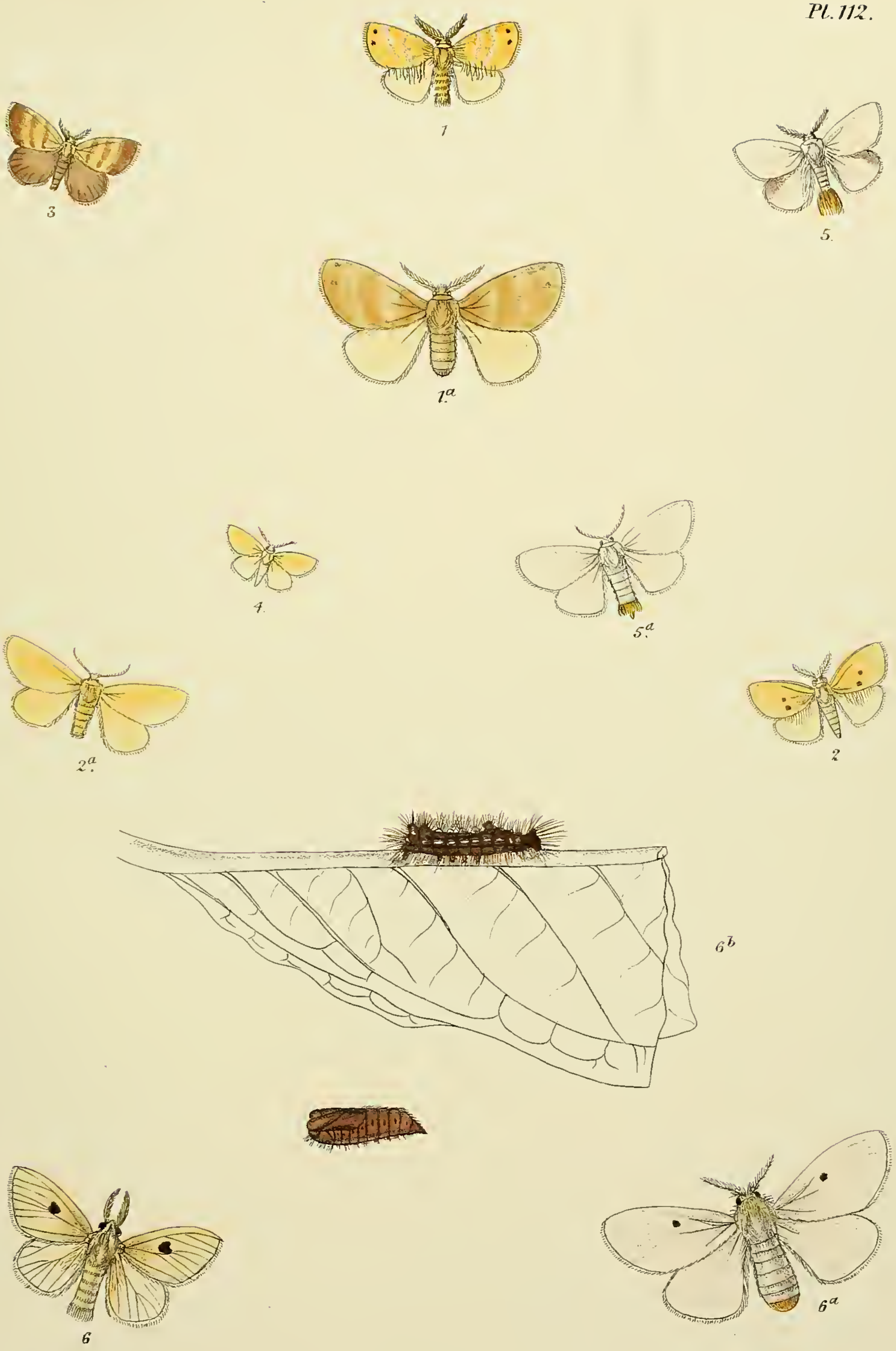
Pl. 112.



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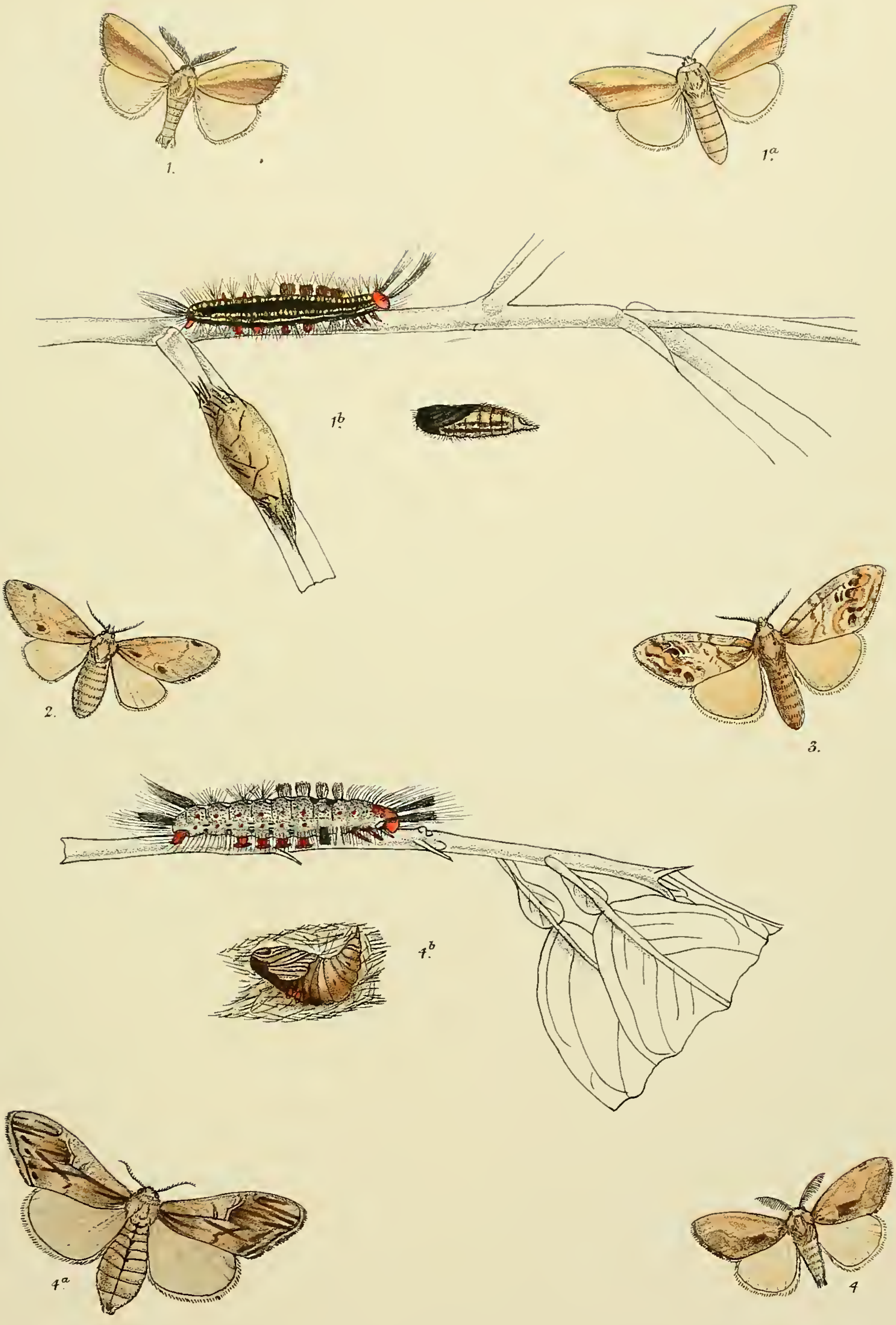

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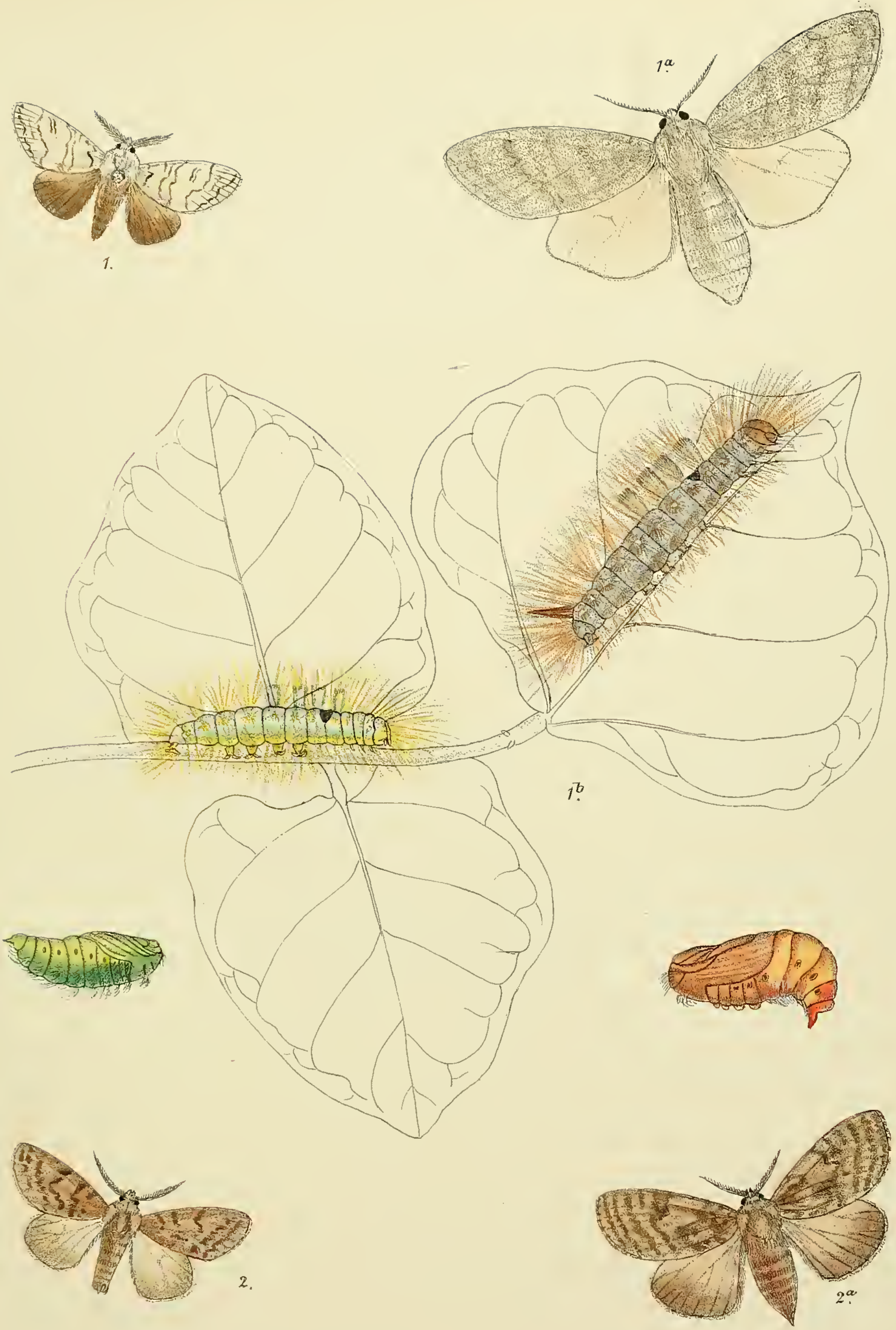

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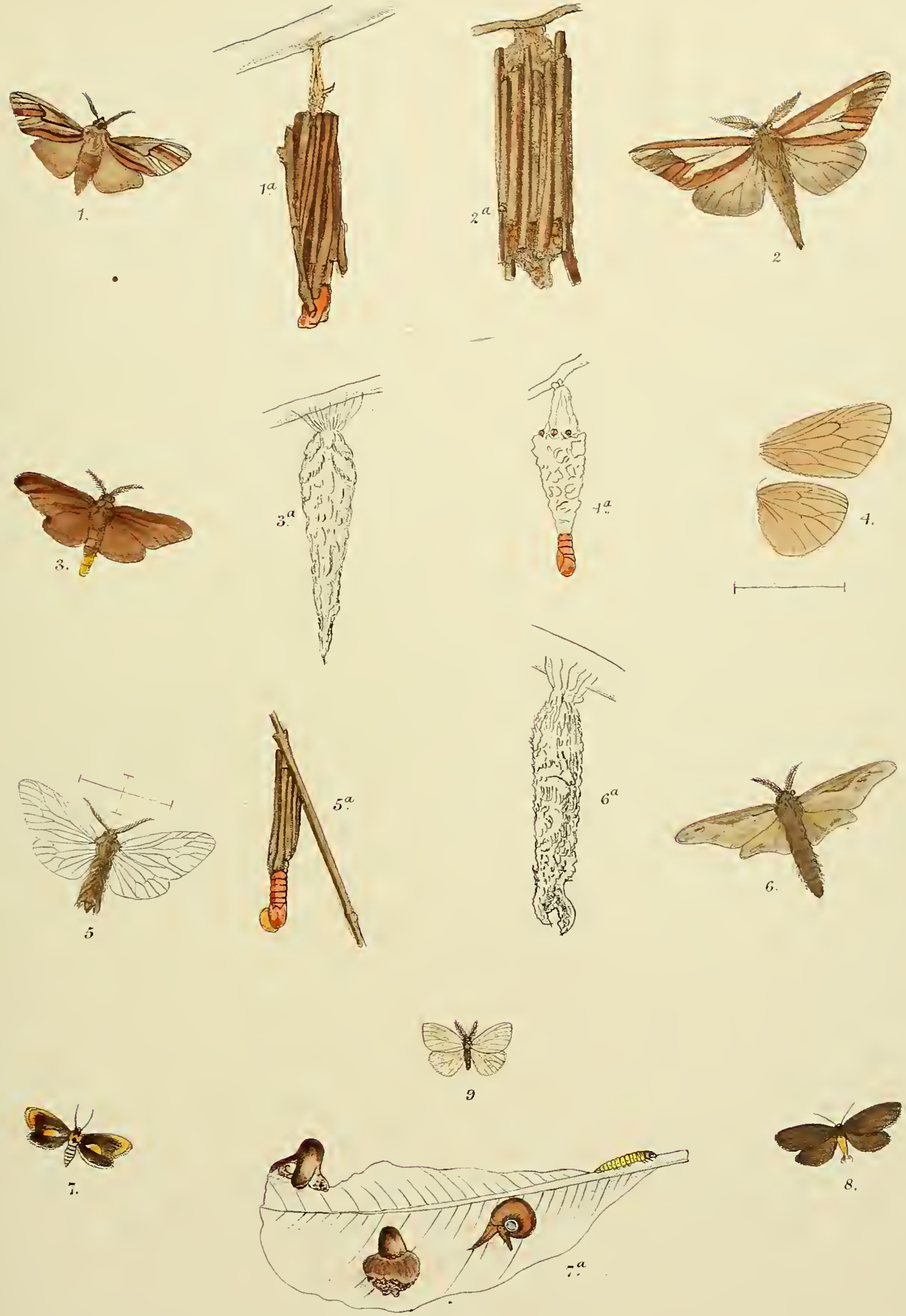
Vincent Brooks Day & Son Imp

L Reeve & Co. London.



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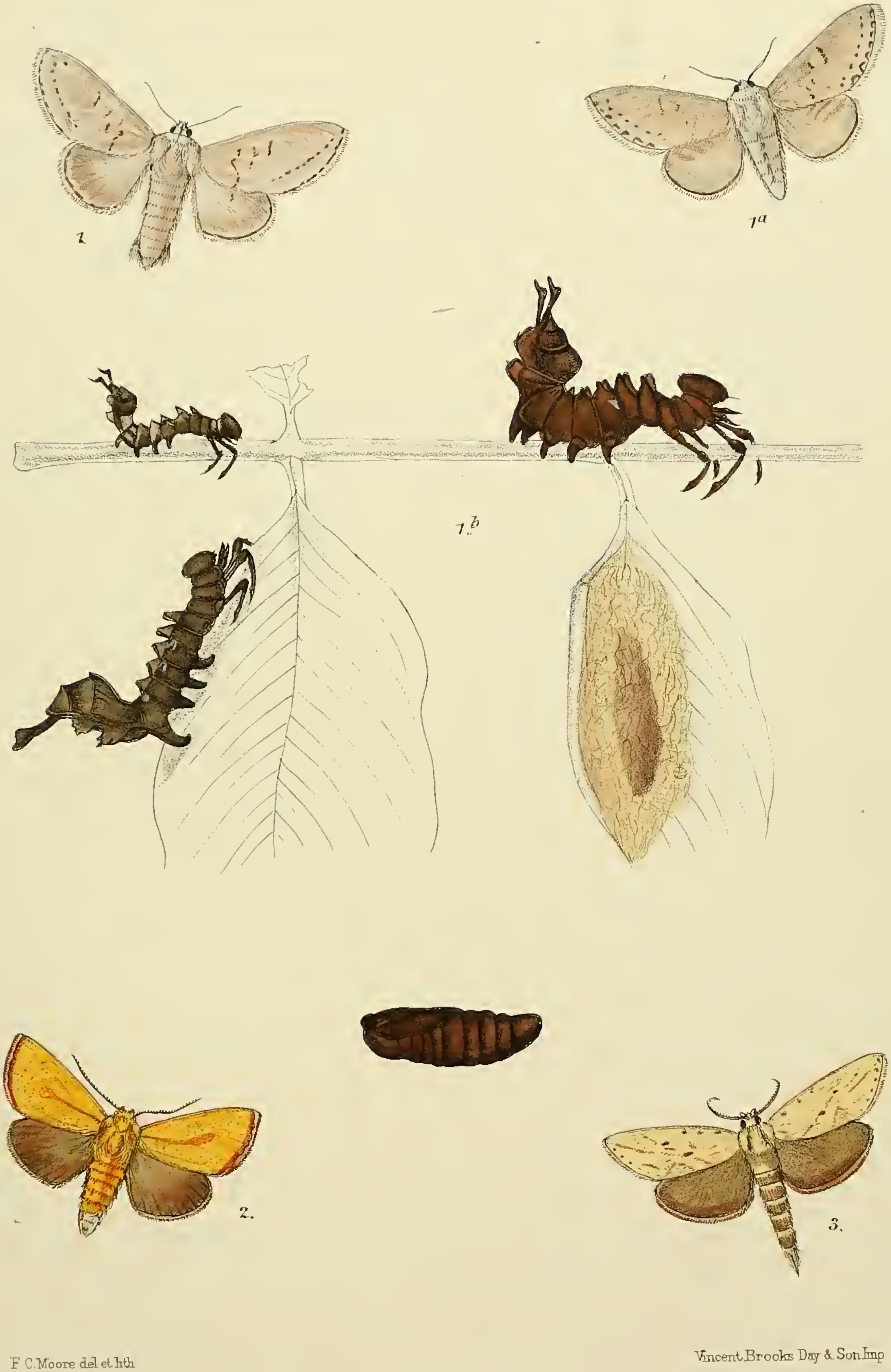

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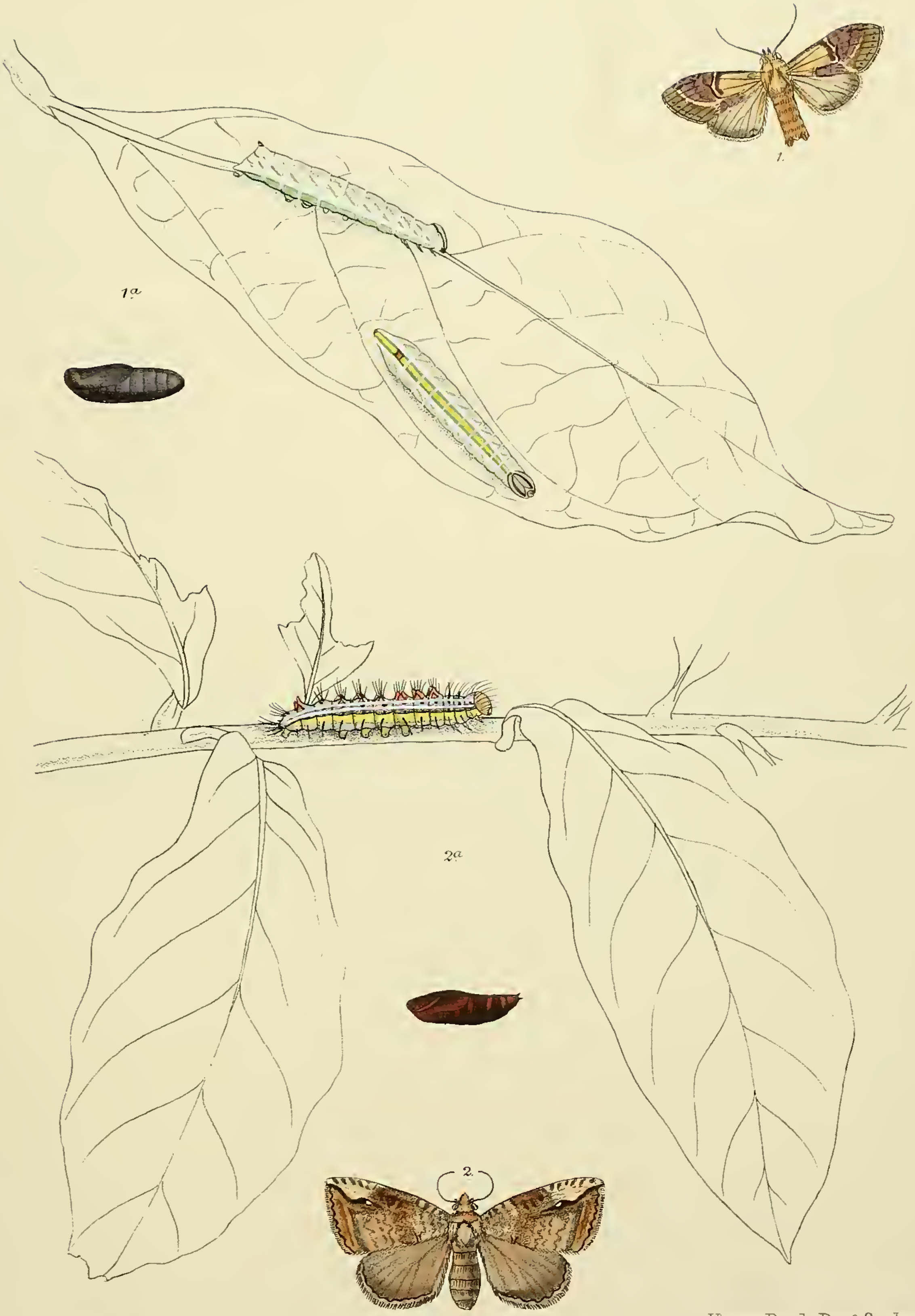
E.C. Moore, del: et lith.

Vincent Brooks Day & Son, Imp:

L. Reeve & Co. London.



F. C. Moore, del: et lith. Vincent Brooks Day & Son, Imp.

L. Reeve & Co. London.

F.C.Moore del et lith.

Vincent Brooks, Day & Son Imp.

L.Reeve & Co. London.

F C Moore, del et lith.

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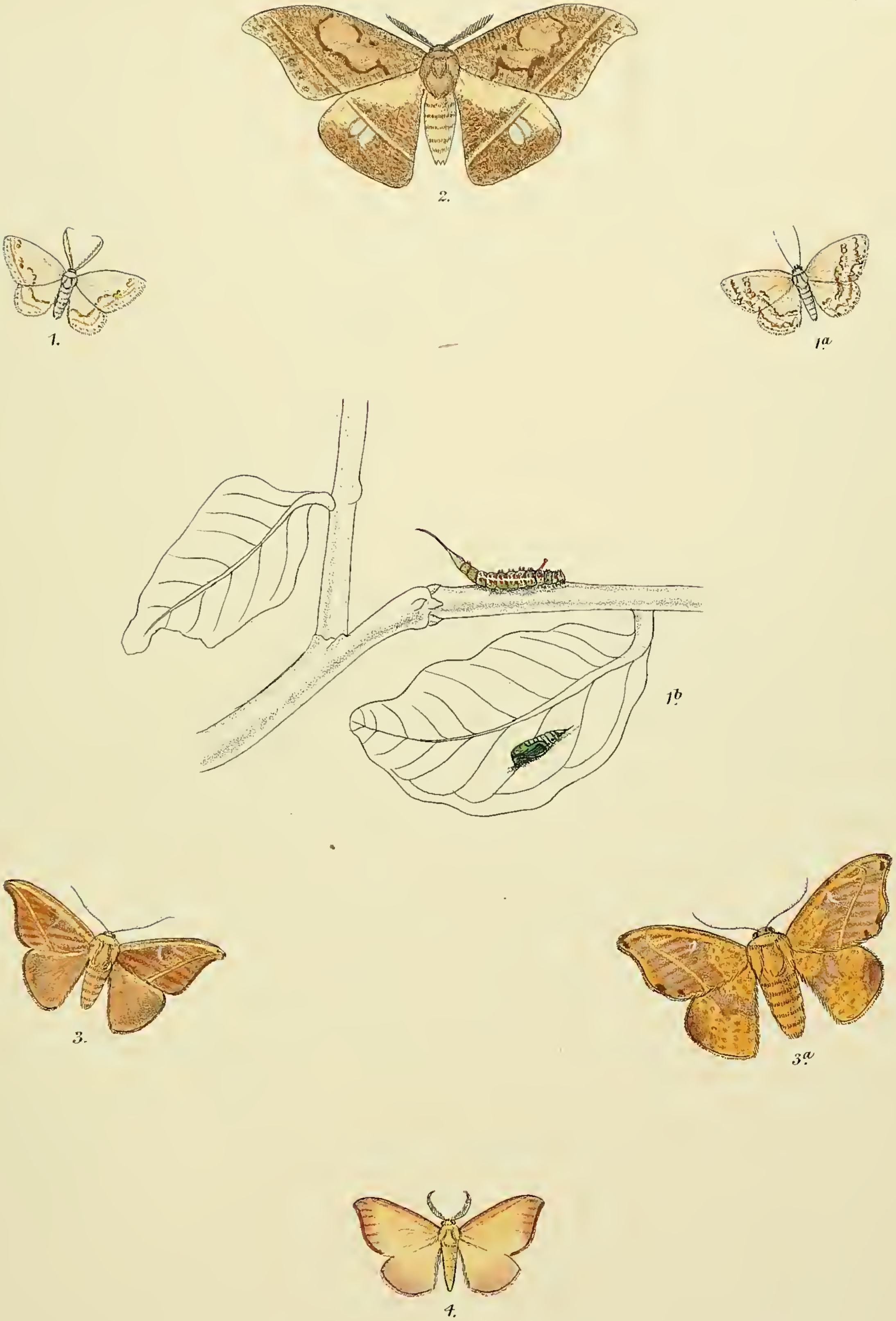
L Reeve & Co. London.



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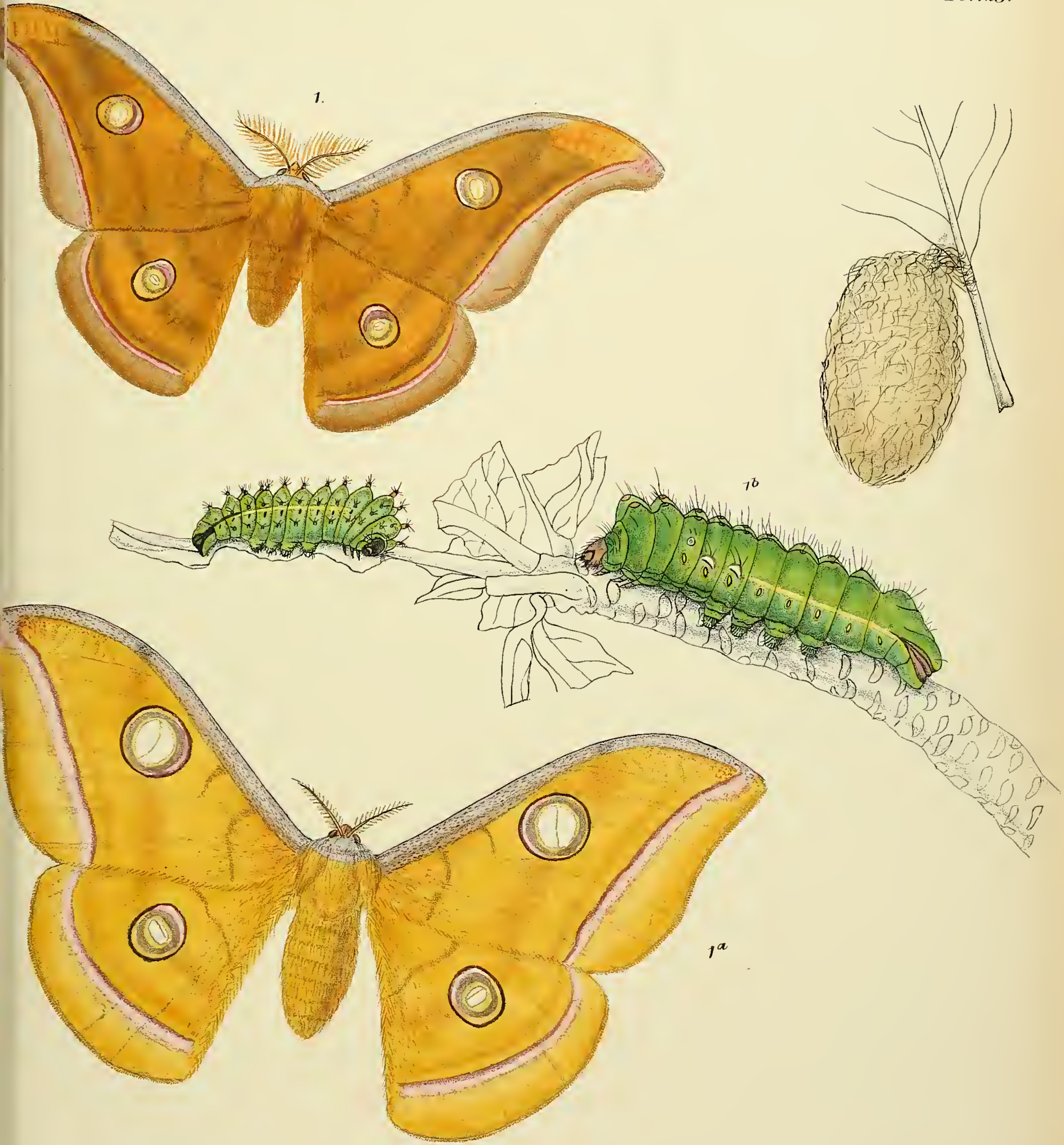

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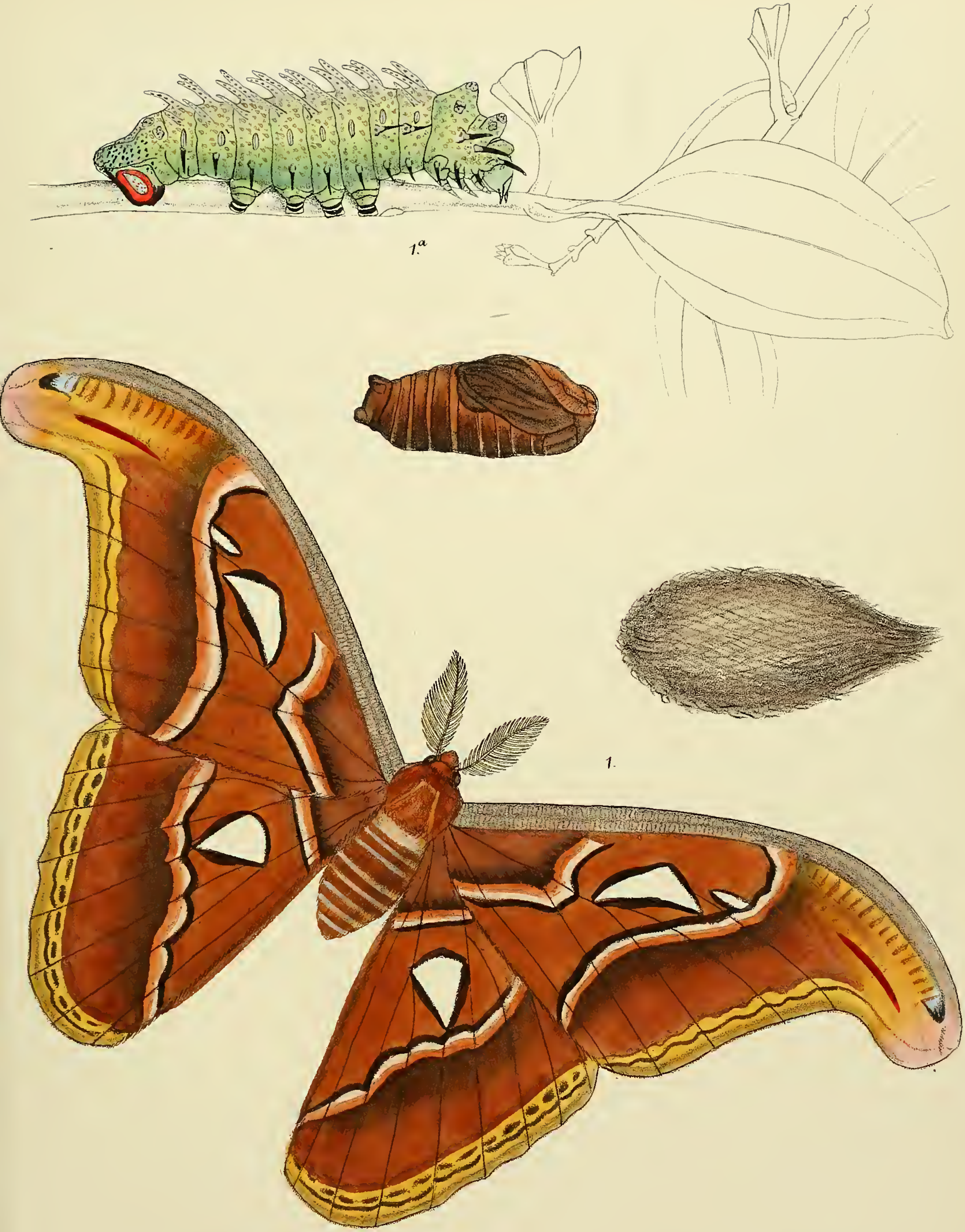

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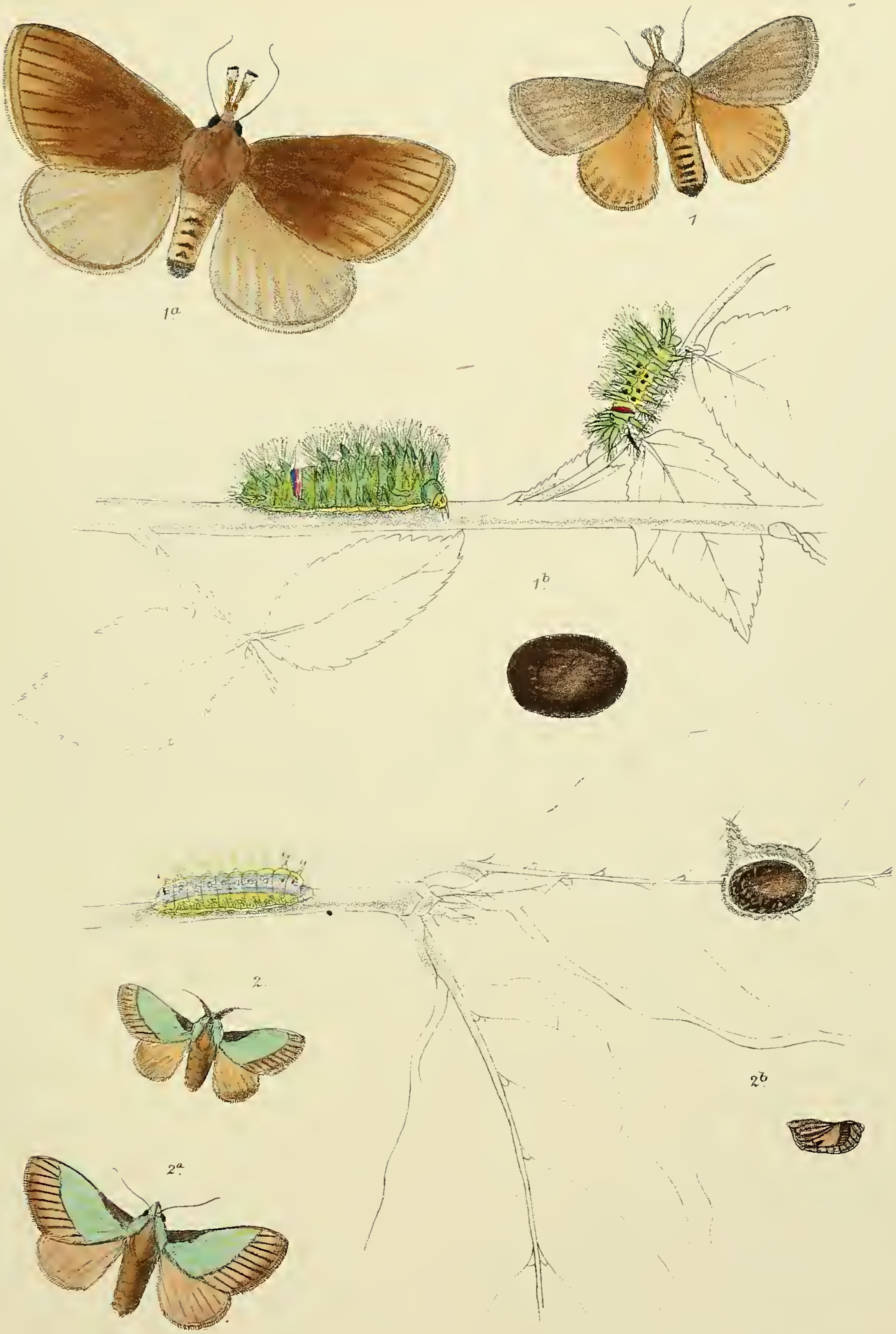

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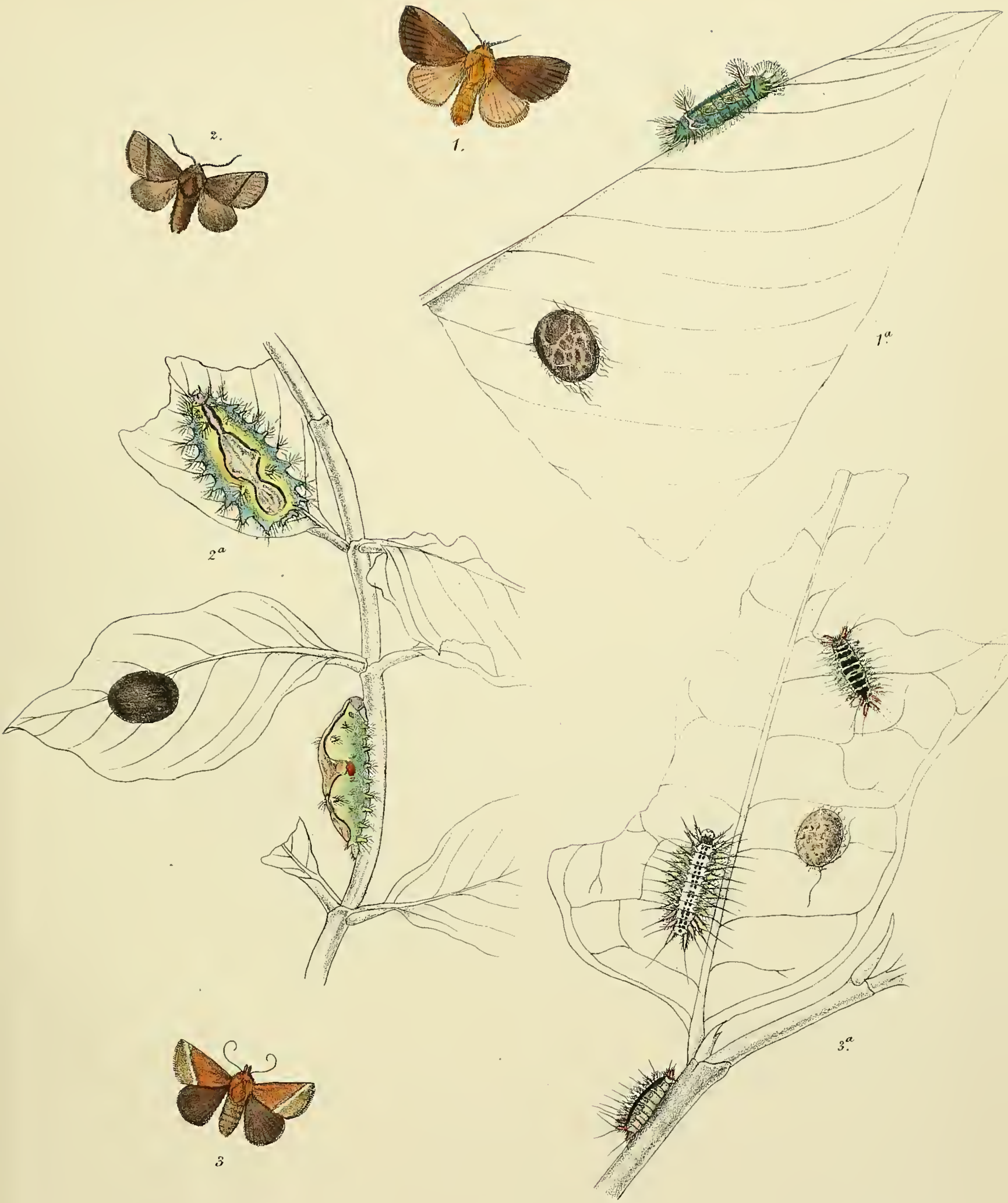

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Vincent Brooks Day & Son Imp

L. Reeve & Co. London.

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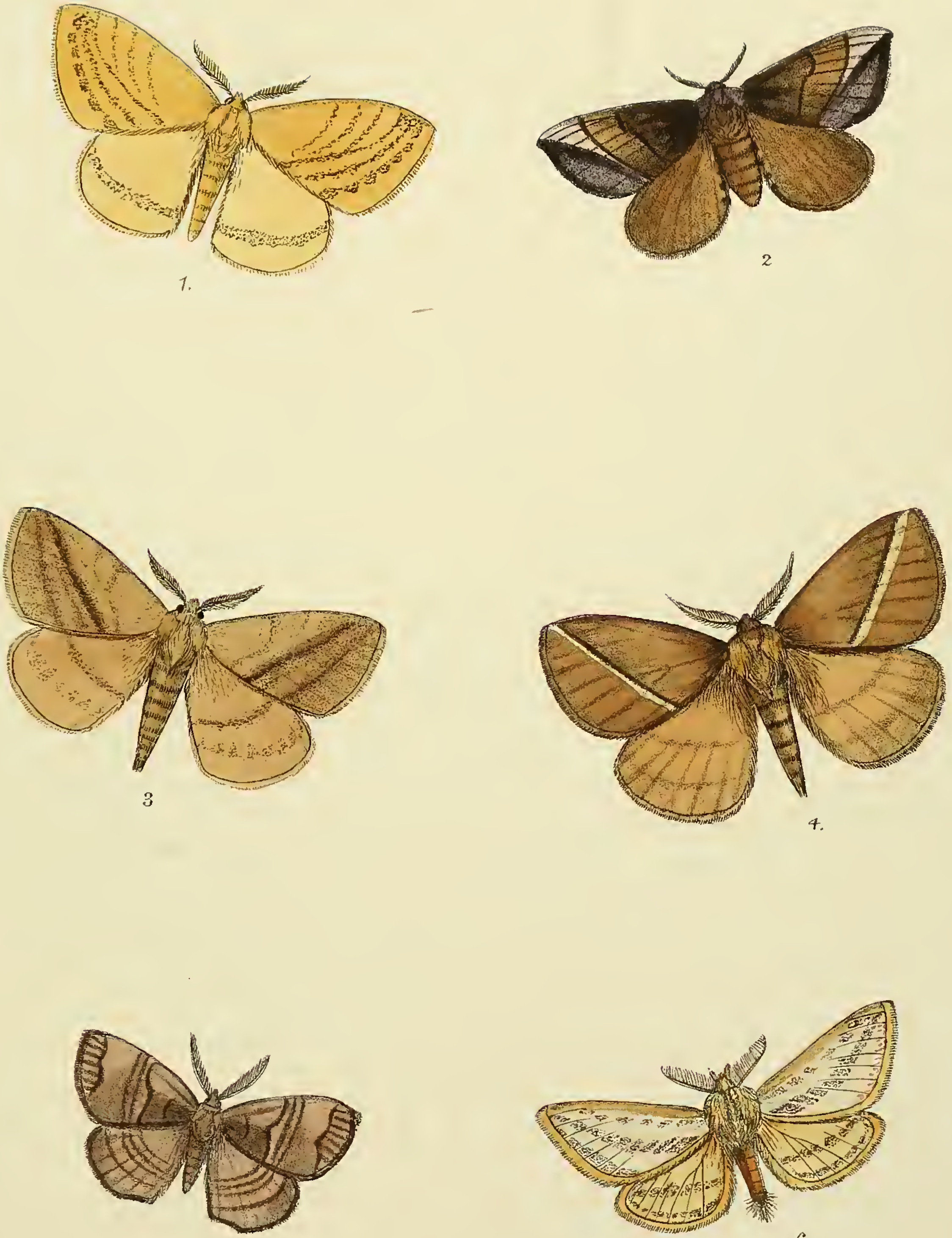
Vincent Brooks Day & Son Imp.

L. Reeve & Co. London



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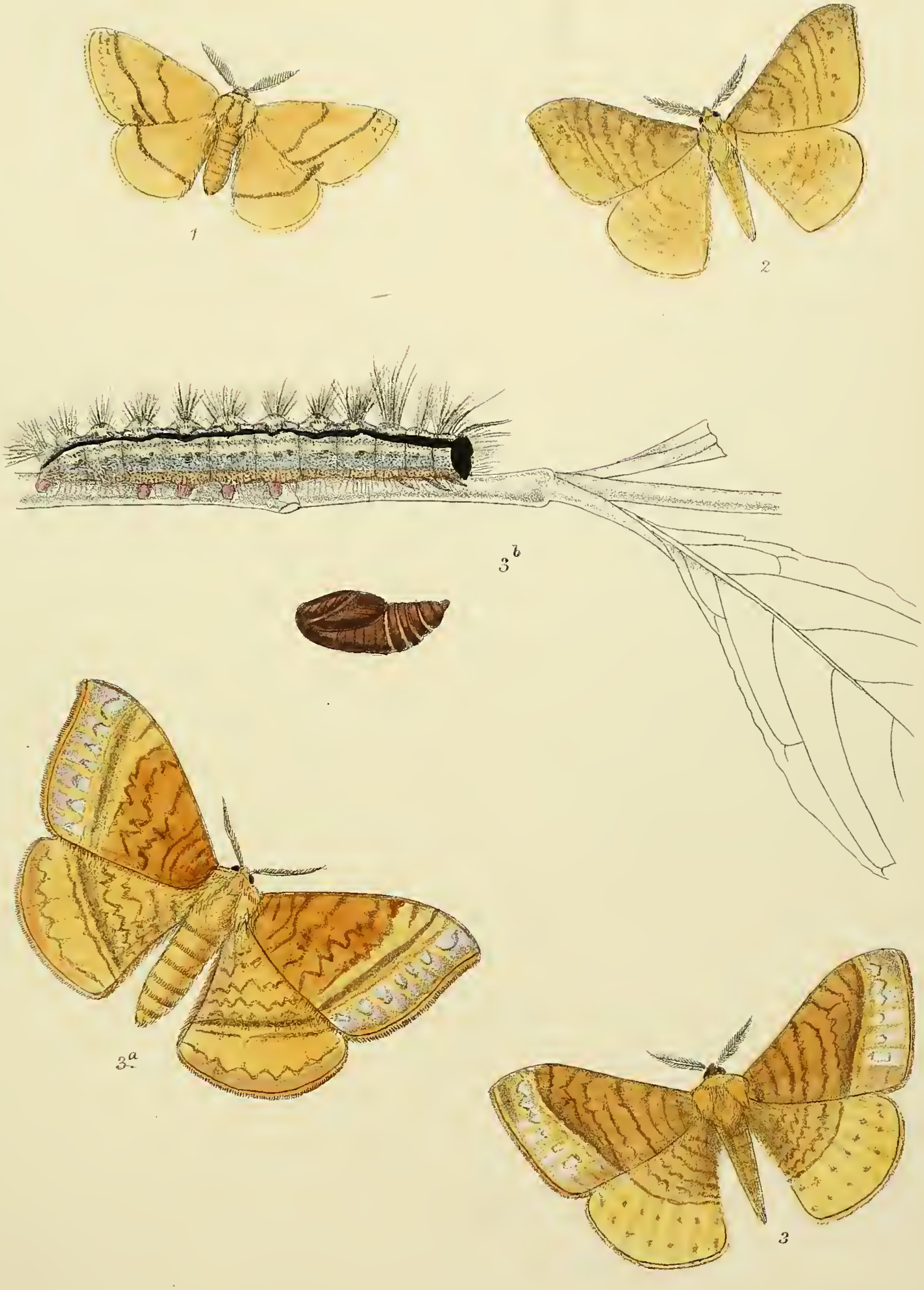

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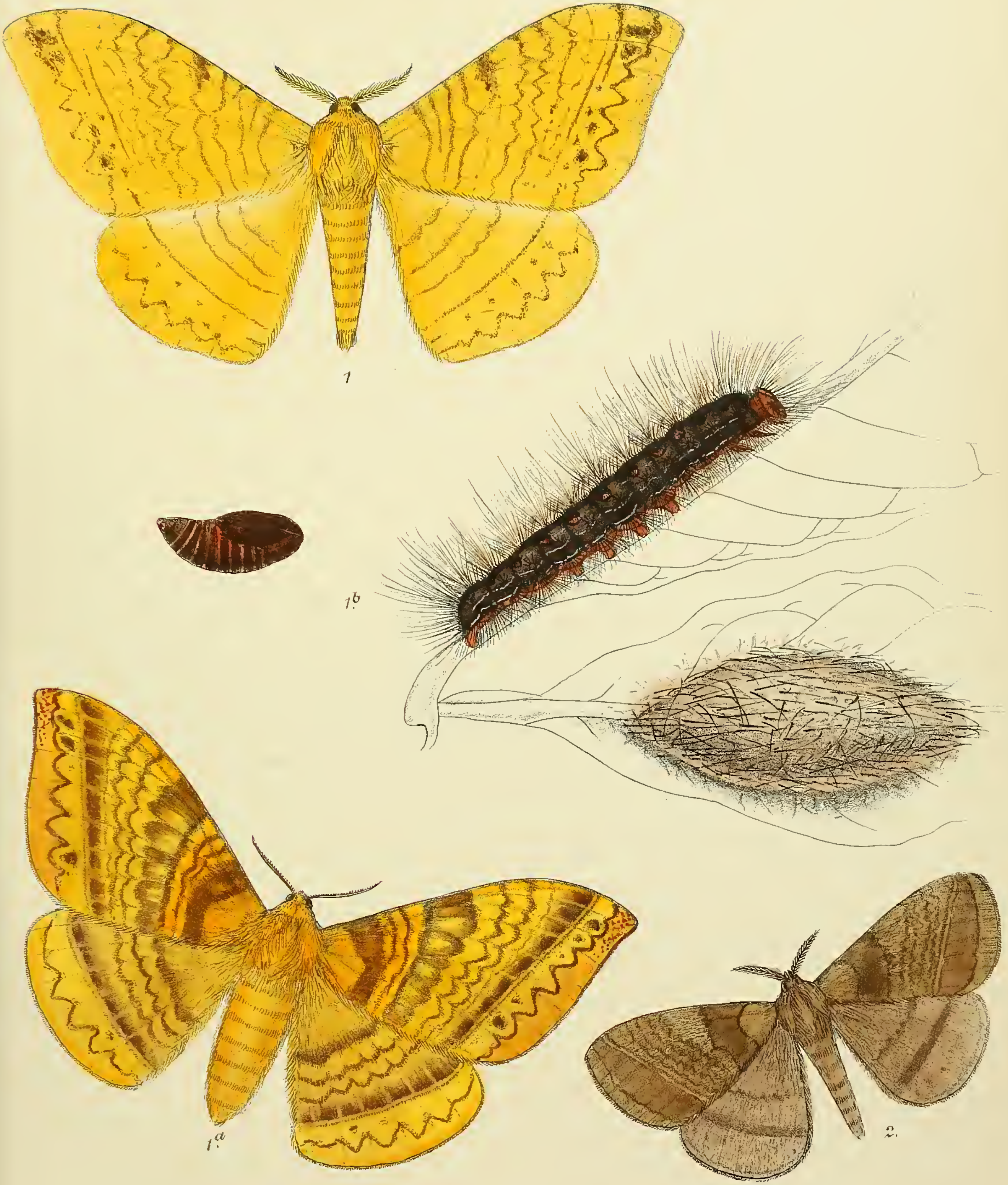

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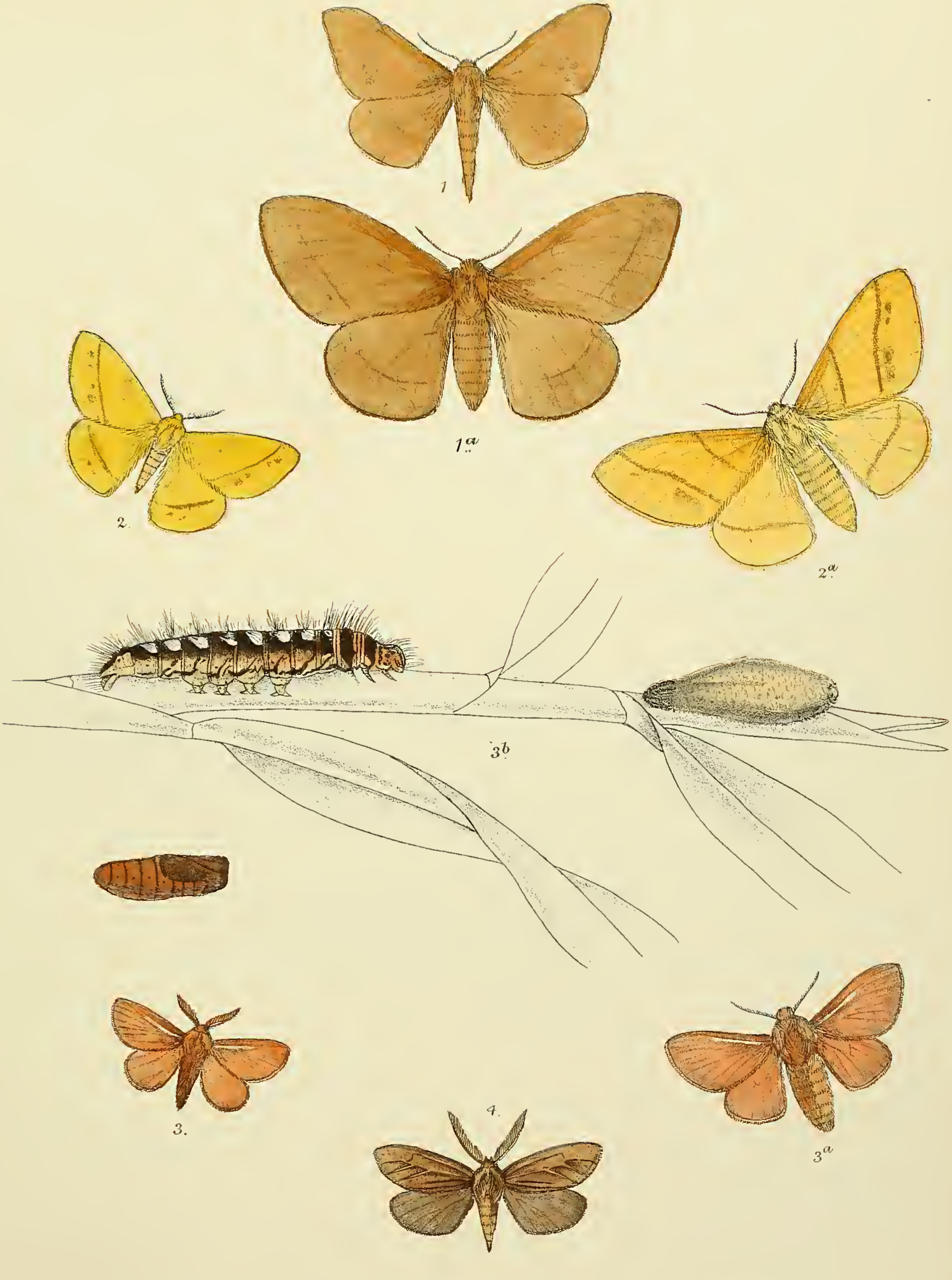

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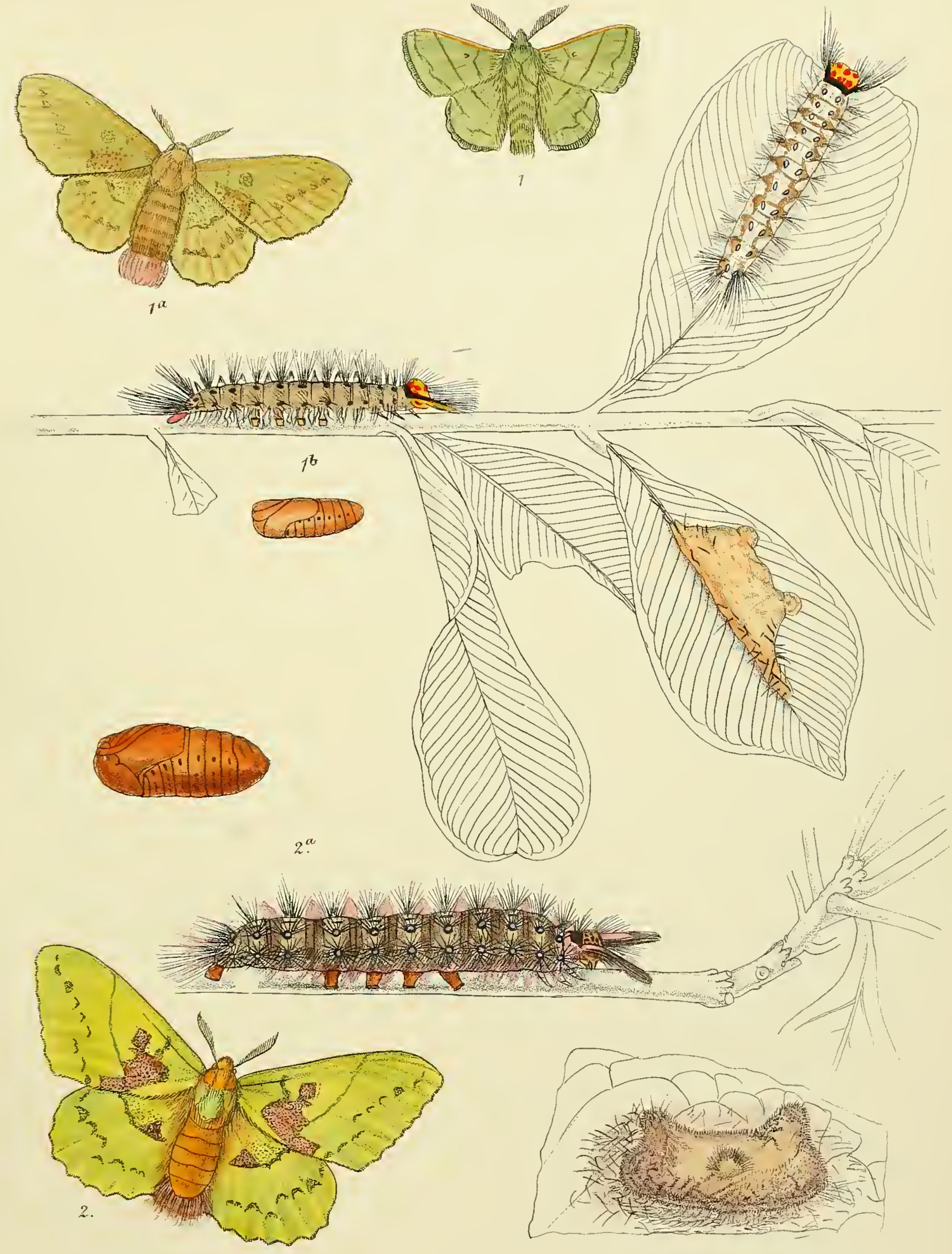

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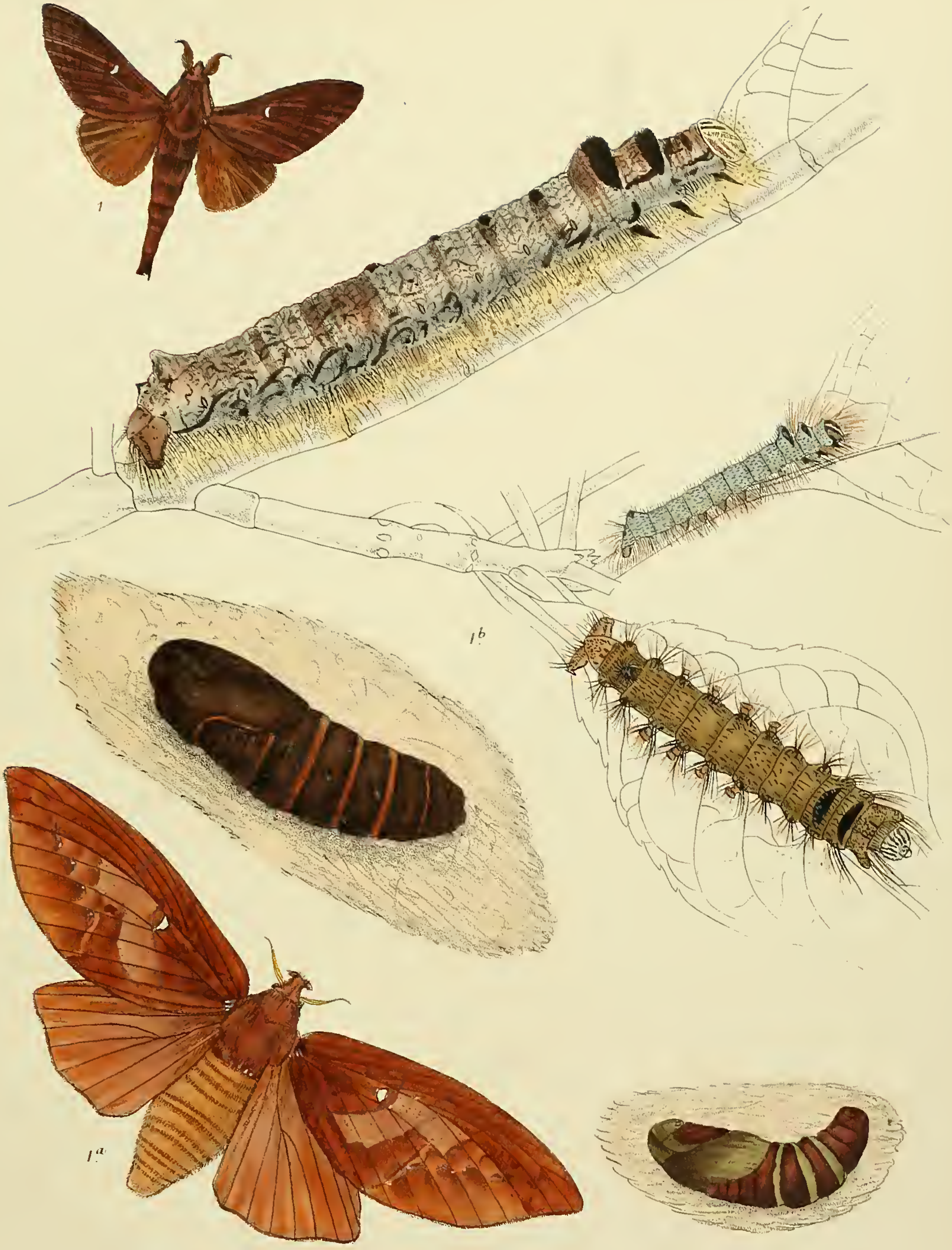

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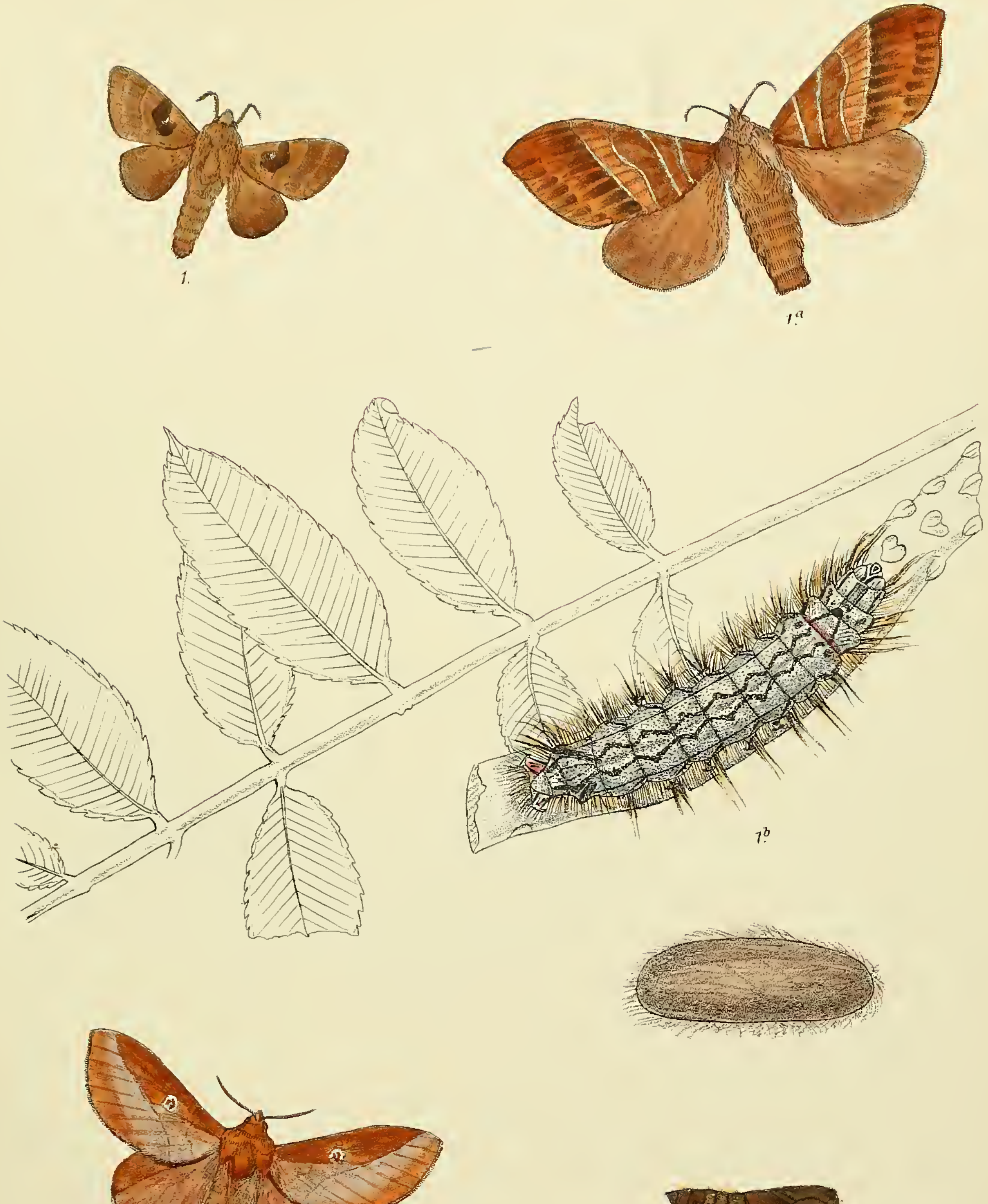

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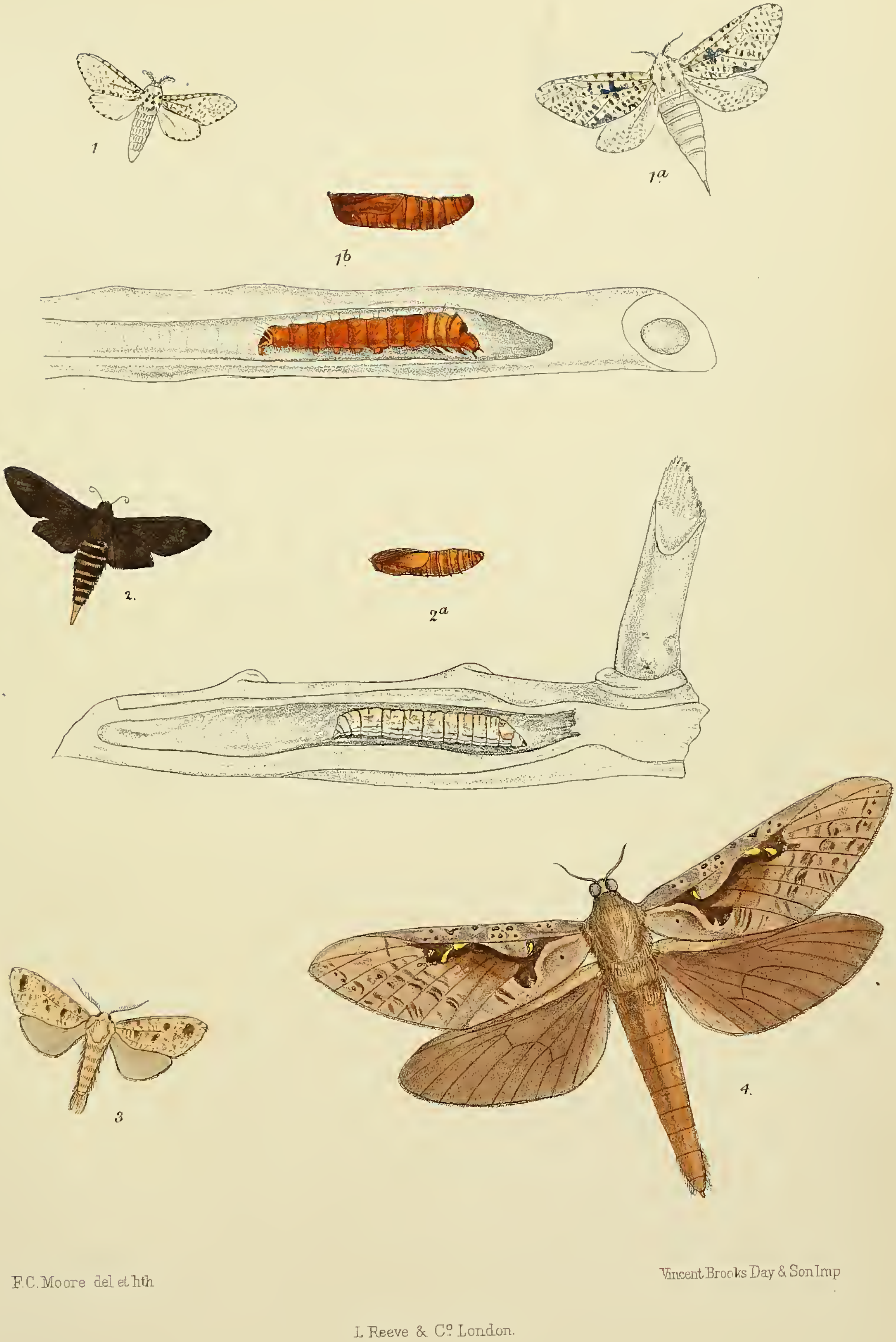
Pl 143.



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Vincent Brooks Day & Son Imp

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